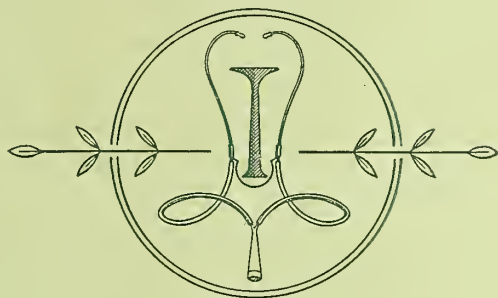


# THE JOURNAL

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# REGULATION

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## DIABETIC EMERGENCIES AND THEIR TREATMENT\*

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Boston, Massachusetts

In the care of diabetic patients there may arise certain emergencies which require prompt recognition and early, energetic treatment. Among these are: (1) Hypoglycemia due to insulin; (2) Diabetic acidosis and coma; and (3) Infection and gangrene of an extremity. These three conditions have in common the fact that almost always they are preventable complications.

### I. HYPOGLYCEMIA DUE TO INSULIN

An insulin "reaction" or "shock" may be due to (1) an excessive dose of insulin, (2) too little food, or (3) physical activity unusual for the individual concerned. It is the visible manifestation of a sub-normal sugar content of the blood and tissue fluids. Almost invariably the blood sugar value during a reaction is below 0.07 or 0.08 per cent although occasionally symptoms may occur at slightly higher levels, notably in two situations: (1) when the blood sugar has fallen rapidly from a high to a low level and (2) when the patient at hand has become accustomed over years of time to blood sugar values above the range of normal.

The symptoms of a reaction due to regular (unmodified) insulin include nervousness, tremor, sweating, faintness, hunger, double vision, rapid heart action, paraesthesias about the mouth and lips, irritability, emotional instability, difficulty in thought and speech and unsteadiness in gait. Uncommonly, unconsciousness with or without convulsions may occur. However, almost all reactions are mild and are characterized merely by a minor degree of nervousness, sweating and irritability coming on without due cause other than insulin.

Whereas reactions due to unmodified insulin occur usually three or four hours after its administration, those caused by protamine zinc insulin do not appear until usually after twelve to twenty-four hours. The

onset of symptoms is more gradual. Headache, often occipital, is common; occasionally nausea and rarely vomiting may occur.

If kept in mind as a possibility, the recognition of hypoglycemic shock usually affords little or no difficulty except at times in an unconscious patient. Patients should be taught that during a reaction the urine as freshly formed by the kidneys is always free from sugar; hence a second specimen of urine, if not the first, will always give a negative test with Benedict's solution if hypoglycemia is present. (One may except the rare diabetic patient with an extremely low renal threshold for sugar). In the unconscious patient, the coma must be differentiated from that of diabetic acidosis, uremia, drug poisoning, overwhelming infections, cerebral hemorrhage, and other conditions. The history and physical examination will in most instances settle the question of diagnosis but one should never hesitate to seek laboratory aid immediately in doubtful situations because nothing approaches in importance a knowledge of the blood sugar. The outstanding points in the differential diagnosis between severe insulin shock and diabetic coma are summarized in the accompanying table.

TABLE 1†

Diabetic Coma vs. Hypoglycemic Coma. Differential  
Diagnosis in the Unconscious Patient.

DIABETIC COMA	INSULIN SHOCK
---------------	---------------

<b>HISTORY</b>	
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Slow onset over a period of hours or days. Brought on by dietary indiscretions, inadequate insulin dosage, infections, thyrotoxicosis, or may appear as the first sign of a hitherto unrecognized diabetes. Onset often with marked thirst, nausea, vomiting, abdominal pain. Then follow rapid, deep breathing and drowsiness, leading to unconsciousness.	
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	Rapid onset over a period of minutes (although with protamine zinc insulin may come on more slowly). Brought on by too much insulin, too little or poorly absorbed food, or physical exercise unusual for the patient. Nausea and vomiting are uncommon.
--	--

<b>PHYSICAL FINDINGS</b>	
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Body temperature is sub-normal unless infection is present. Skin is dry; mucous membranes and tissues show signs of dehydration; eyeballs are soft. Patient appears extremely ill; may be restless and moaning, as with pain. Respiration deep and labored (Kussmaul) except in preterminal stages. Pulse weak and rapid; blood pressure tends to be low.	
---	--

	Body temperature is usually normal. Skin moist; clothing often soaked with perspiration. Normal hydration of tissues; tension of eyeballs normal. Convulsions may be present. Respiration normal. Blood pressure tends to rise in certain stages.
--	---

(\*From the George F. Baker Clinic, Elliott P. Joslin, M. D., Medical Director, New England Deaconess Hospital, Boston, Massachusetts.)

†Reprinted from the New England Journal of Medicine, 217, 130 (July) 1937, with the permission of the editor.

## LABORATORY FINDINGS

Much sugar, acetone and acetoacetic acid in blood and urine. Plasma CO<sub>2</sub> low. No sugar in urine (second specimen), low blood sugar, normal plasma CO<sub>2</sub>.

## TREATMENT

Insulin, fluid, salt, glucose and supportive measures produce gradual improvement. Glucose parenterally brings about prompt recovery.

Treatment consists in the giving of orange or other fruit juices, gingerale, sugar, candy, or other simple food which is readily digested and quickly absorbed. Usually five or ten grams of carbohydrate suffice for relief although repetition of treatment thirty or sixty minutes later may be necessary in dealing with reactions due to protamine insulin because of the recurrence of symptoms. When it is difficult to secure cooperation in a child, syrup may at times be successfully introduced into the mouth with a spoon. Feeding by stomach tube may be resorted to if carefully performed. Often the injection of 0.5 cc. of epinephrine or pituitrin subcutaneously may bring about sufficient return to consciousness of a stuporous patient to permit cooperation in taking fluids orally. Glucose in five per cent solution may be administered subcutaneously. The giving of a solution of glucose rectally is of doubtful value.

Dramatic return to consciousness in the patient with marked hypoglycemia may usually be secured with the injection intravenously of ten grams of glucose in a sterile, buffered fifty per cent solution. Vials containing such should be part of the routine equipment in the bag of every physician doing general practice. In an unconscious patient in whom the diagnosis is difficult and when laboratory aid is not readily obtainable, the injection of glucose as a diagnostic aid is justifiable but the following rule must be followed without question: In order to assume that the patient has been suffering from hypoglycemia, the return to consciousness after an injection of glucose must be prompt and complete. If such is not the case, laboratory aid and usually hospitalization are imperative regardless of inconvenience.

Hypoglycemia is not a serious complication; very few fatal cases are on record. It may be, however, at times most inconveniencing and embarrassing and of possible danger in the elderly, sclerotic person. It is apt to be more feared by the patient than other complications of greater significance. Hence, care should be taken to avoid insulin reactions because only in this way can large groups of patients the world over be induced over years of time to obtain from insulin the benefit to which they have a right.

In the prevention of reactions, the following points should be observed: (1) careful adjustment of insulin dosage; (2) additional food (providing for five to twenty grams of carbohydrate) prior to physical activity unusual for the individual; (3)

between-meal lunches of five to ten grams of carbohydrate in patients sensitive to insulin. The third suggestion is of particular value in patients using protamine zinc insulin for here it is of decided advantage to distribute the food over the waking part of the day. A lunch of ten to twenty grams of carbohydrate at bedtime may well be prescribed routinely for patients using the slowly-acting insulin. One should keep in mind that for the prevention of insulin reactions food which requires considerable digestion is preferable to that which is readily absorbed and therefore exerts only a temporary effect upon the blood sugar.

## II. DIABETIC COMA

Of far greater seriousness is the dreaded complication of diabetic acidosis or coma. It represents the end-stage of uncontrolled diabetes and with patients who suffer one or more attacks of outspoken diabetic coma, it is reasonable to suppose that periods of poorly controlled diabetes with milder grades of chronic acidosis may have preceded the acute manifestations of the disease. Formerly the chief scourge of the diabetic, its incidence and mortality have greatly diminished since the advent of insulin. Fortunately, today almost all cases are preventable. This makes all the more deplorable the fact that even today, sixteen years after the introduction of insulin, patients still acquire diabetic coma and some die from it. It remains today the major cause of death among diabetic children.

The chief causes of diabetic coma are: (1) overeating, which may be the diet-breaking of the patient who knows better or the innocent overindulgence of the person with whom the diagnosis of diabetes has never been made; (2) too little insulin or no insulin; (3) infections, particularly with fever; (4) disturbances of bodily metabolism such as that seen in thyrotoxicosis. Little needs to be said regarding diet-breaking or the taking of an inadequate amount of insulin; the two often go hand-in-hand. The influence of infections is real; the diabetic must early be taught to expect a flare-up in his condition whenever an infection is present, especially if accompanied by fever. He must know that during such an illness that the chances are great that his usual dosage of insulin will be necessary even though he takes but little food. It must be second nature to him to continue his insulin at all times unless the urine is found at regular intervals to be free from sugar.

The symptoms of diabetic coma are variable but usually consist of malaise, weakness, headache, thirst, nausea, vomiting, and abdominal pain. If untreated, deep breathing appears and a fruity odor may be detected in the expired air. Drowsiness follows and proceeds to coma and finally to death. Fortunately,



the progress is not a matter of minutes as in hypoglycemic shock but usually one of hours or even days so that usually ample time is available for diagnosis and energetic treatment. It follows from this that a case of full-blown diabetic coma almost invariably represents gross neglect on someone's part.

On physical examination the patient in well-advanced diabetic coma is unconscious or can be aroused only with difficulty. The respiration is of the long, deep, rapid, "air-hunger" (Kussmaul) type except terminally when it may be simply feeble and gasping in character. At times the acetone odor of the breath may be marked. A striking feature is the dehydration of the skin and mucous membranes. The tongue is dry and usually has a brownish coat. The eye-balls are soft. The body temperature is subnormal and the cold extremities may present a mottled bluish color. The tendon reflexes may be diminished or absent and the muscles be flaccid. The patient may moan as if in pain and at intervals may vomit dark brown fluid.

The urine except in rare instances gives a markedly positive test for acetone and diacetic acid (sodium nitroprusside and ferric chloride tests) and for sugar. Albumin is usually present and almost invariably "showers" of granular casts may be seen in the urinary sediment. The blood sugar is high; 0.50 per cent may be considered an average value. The plasma  $\text{CO}_2$  combining power is much reduced: the severer grades of acidosis are accompanied by values below twenty volumes per cent; values below ten are not uncommon, and below five volumes per cent occasionally, encountered. Particularly if vomiting has occurred, the sodium and chloride content of the blood is below normal. Leucocytosis is the rule with counts commonly between 15,000 and 30,000; values as high as 80,000 white blood cells per cubic mm. have been recorded in cases of uncomplicated coma.

The secret of the successful treatment of diabetic coma lies in prompt diagnosis followed by energetic personal treatment. There is no question but that incomparably better results can be obtained if treatment is carried out in a hospital where the patient can be watched carefully and laboratory studies carried out promptly. Diabetic coma is not an illness in which the physician may leave orders as to treatment and go away to return a few hours later. He must remain at the bedside or within easy call, particularly in the all-important first two to six hours of treatment. Often tentative orders must be changed at frequent intervals according to the patient's condition and his response to treatment.

If the patient is to be brought to the hospital from some distance and if the diagnosis seems certain, one may order by telephone an initial dose of forty or

fifty units of insulin before the patient leaves home. At the hospital everything should be made ready for the reception of the patient. Upon arrival blood and urine specimens are obtained at once so that analyses can be carried out while other procedures are under way. A complete history and physical examination are essential in order to establish the diagnosis but they should be done with dispatch so that no time is lost in beginning treatment. The physical examination should be repeated at intervals, particularly if the expected response to treatment does not take place. In such instances, often a responsible complication may be disclosed.

The essentials in treatment are as follows: (1) Unmodified insulin should be given promptly in large amounts. The initial dose given immediately after the diagnosis has been made may vary from twenty to one hundred units according to the age of the patient, severity of the diabetes and the duration and severity of the acidosis. A common initial dose for an adult is forty to fifty units. This may be repeated at half-hourly intervals for one to three or more doses. A second determination of the blood sugar and the plasma  $\text{CO}_2$  combining power at the end of two or three hours will serve together with the physician's estimate of the clinical condition, as a check upon the adequacy of the insulin dosage. The insulin should be given subcutaneously although in patients with advanced coma and circulatory collapse, an initial dose of fifty to one hundred units may be given intravenously along with that injected subcutaneously but otherwise it is doubtful if the intravenous route offers any advantage. A single large dose of protamine zinc insulin may be given initially to some patients to serve as a "back-log" but except in special cases or in experienced hands should be used only as an accompaniment of unmodified insulin.

Once the clinical condition of the patient shows progressive improvement and the laboratory data indicate falling blood sugar and rising plasma  $\text{CO}_2$  values together with disappearance of diacetic acid and diminution of sugar in the urine, the administration of large doses of insulin at frequent intervals may be pushed less energetically. One may then obtain a specimen of urine at hourly intervals and give insulin according to a schedule such as the following:

If Benedict's test is	Red	Orange	Yellow	Yellow-Green	Green or Blue
Give (units of insulin) .....	24	20	16	12	0

The amounts of insulin as shown above must be altered according to the situation at hand. When the urine tests (Benedict's) become green or blue, the interval of collection may be increased to two and later to three or four hours.

The chief point about the dosage of insulin in diabetic coma is to give enough regardless of the number of units required. This was emphasized recently by Root and Riseman<sup>1</sup> in a report of two cases in which recovery took place with the administration of 1280 and 850 units respectively in the first twenty-four hours after admission. In each case, success in treatment seemed without question attributable to the giving of the huge doses of insulin together with extraordinarily large amounts of physiologic solution of sodium chloride parenterally (13,800 cc. and 11,600 cc. respectively, within the first twenty-nine hours).

(2) Fluid and Salt. Insulin alone is not enough although in adequate dosage it wins more than half the battle. Complete success is due almost always to the administration of fluid and sodium chloride orally and parenterally in amounts adequate to combat dehydration on the one hand and electrolyte lack on the other. At the beginning of treatment, 1500 cc. of a physiologic solution of sodium chloride may be given subcutaneously or 1000 cc. intravenously (smaller amounts for small children). These amounts may be repeated one, two, or more times during the first six to eight hours of treatment. On the average, four to five liters of total fluid (orally and parenterally) may be given to advantage in the first twenty-four hours and as stated in the preceding paragraph, much larger amounts may occasionally be demanded. In circulatory collapse a constant infusion of salt solution intravenously may be of decisive value.

(3) Gastric lavage should rarely be omitted and should be carried out early in treatment. One usually is able to relieve the stomach of large amounts of fluid colored by changed blood and often containing remains of undigested food. The lavage relieves gastric distention, stops vomiting and prepares the way for the oral administration of carbohydrate-containing fluid one to three hours later. A cleansing enema during the first few hours of treatment is helpful.

(4) Warmth provided by blankets and hot water bottles so placed as to not burn the patient aids in overcoming the shock often present in acidosis.

(5) Stimulants as caffeine, adrenaline and ephedrine may be used in circulatory collapse but rarely are they of striking benefit. The transfusion of whole blood may be of value if the procedure can be carried out quickly enough. As stated above, the constant infusion of salt solution intravenously should always be thought of in patients with this most serious of all complications, circulatory collapse with a low blood pressure, rapid, weak pulse and oliguria.

(6) In our clinic, glucose is not added to the salt solution given parenterally in the first few hours of treatment. There are two reasons for not using it: First, there is no evidence to indicate that the sugar

which is flooding the body fluids of the patient in diabetic coma is not in as suitable form for utilization as any glucose which one might inject; second, it is obviously impossible to follow the progress of treatment as regards the sugar in the blood and urine if glucose is being infused. However, as soon as the patient is able to take fluids by mouth, water in amounts of 100 cc. hourly should be given. If this is well borne, then carbohydrate-containing liquids as gruel, fruit juices, tea with sugar, gingerale, etc. may be given cautiously in like amounts. Within the first twenty-four hours at least one hundred grams of carbohydrate should be given.

(7) Alkalies are an unnecessary adjunct to treatment and in excessive dosage may do harm. Often their administration may divert attention from the essential agents in treatment. If given intravenously, racemic sodium lactate as advocated by Hartman<sup>2</sup> is probably the best form.

### III. INFECTION AND GANGRENE OF AN EXTREMITY

Peripheral arteriosclerosis and the resulting impaired circulation in the extremities of diabetic individuals develop slowly over months and years of time. However, the infection and gangrene which may arise on this basis develop more rapidly, over a period of hours and days. One does not err, therefore, in including these complications among diabetic emergencies because often prompt recognition of the gravity of the condition in its incipient stage together with careful treatment may make the difference between keeping and losing a leg or even a life. The following brief discussion is written in the language of the internist and is not intended to be a surgical presentation. The surgical methods outlined are those used by our colleagues, Dr. L. S. McKittrick and Dr. T. C. Pratt<sup>3</sup>. Close cooperation between the surgeon and the physician is essential and patients must be treated in wards freely accessible to both.

In the evaluation of the degree of circulatory impairment in the feet and lower legs, simple clinical procedures usually suffice. In the history, pain brought on by walking and relieved by rest ("intermittent claudication") is characteristic of circulatory insufficiency. In the physical examination the following are important: (1) State of nutrition: If the circulation is impaired, the skin may appear thin, shiny and atrophic, the amount of subcutaneous fat may be reduced and the muscles may be atrophied. (2) Color changes: A foot with impaired circulation becomes a dull purplish-red when dependent and blanches quickly upon elevation. The degree and level of abnormal color change afford an index as to the extent of circulatory insufficiency. (3) Skin temperature changes: The temperature of the skin



over the feet and legs as tested by the back of the hand of the examiner is lower on the affected side. In a given leg, the height and abruptness of temperature change reflect the level of arterial occlusion.

(4) Pulsation of peripheral vessels: Dorsalis pedis, posterior tibial, popliteal and femoral arteries. Of these the first named is the most important.

Early in his diabetic education, the patient must be informed regarding the possible danger to his feet from hot water bottles, electric pads, hot bricks, heaters, corn "cures", strong disinfectants as lysol and tincture of iodine, new shoes worn for too long a time at first and the improper cutting of corns and calluses. He must be taught that prevention is far better than any treatment available today. He must be told to guard carefully against any break in the skin over the feet and to report to his physician if any infection develops.

When infection or gangrene or both have developed, treatment must be suited to the condition at hand. The simplest and often most effective single rule in treatment—and yet the one most commonly disregarded—is that of putting the affected part at complete rest. Almost always the patient should be confined to bed and kept strictly off his feet. It is difficult to enforce this rule unless the patient is in the hospital because at home the patient reasons that a few minutes on his feet two, three, or more times a day to go to the bathroom or to meals can do no possible harm. However, time after time one sees a lesion heal in a few weeks when the patient is kept off his feet, whereas months of partial limitation of activity at home has failed to accomplish this.

In the presence of acute infection particularly with lymphangitis, hot moist compresses (with the skin protected) constantly or at hourly or two-hourly intervals are helpful. Local medication is relatively unimportant in acute conditions although in more chronic stages may be of benefit. Hexylresorcinol is a safe, mild antiseptic though in open lesions it should be diluted to one-fourth strength with sterile water. Dakin's solution is helpful in the treatment of sloughing, infected lesions but care should be taken to protect the surrounding skin from irritation.

One knows that it is useless to carry out local, minor amputations in a cold, pulseless foot. It is at times difficult to convince a patient of this, particularly if the local lesion is small. Occasionally, in a foot in which although no pulse can be felt, a good collateral circulation seems present, amputation of a toe, as for osteomyelitis, may be justifiably attempted although one avoids suturing the operative wound.

Attempt should be made to avoid radical surgery whenever possible but all too often such conservatism is carried too far. Patients are allowed to nurse a painful, gangrenous toe or foot for months in the

hope of eventual recovery. Not only is the patient incapacitated and kept suffering for this long period but also he is made to spend most unprofitably what may be a large fraction of his remaining life. One is sobered by the fact that in our clinic a recent study has shown that within three years after the onset of gangrene, 100 of 166 patients had died. The cause of death was in most instances some manifestation of arteriosclerosis: peripheral gangrene, coronary thrombosis, or cerebral hemorrhage.

With most patients with gangrene who lack pulsations in the dorsalis pedis and popliteal arteries of the affected extremity, the simplest and most satisfactory type of amputation is that through the extreme lower part of the thigh. Patients who are relatively young, who are of heavy build and whose occupation involves much standing may obtain greater satisfaction from the Gritti-Stokes procedure. In occasional patients amputation through the lower leg is possible, thus preserving the knee joint. Ordinarily, the skin edges are sutured without the insertion of drainage tubes. The wounds usually heal by first intention. Almost invariably low spinal anaesthesia is used.

Reserved as a life-saving operation is the guillotine amputation usually done through the lower leg when extensive infection and gangrene of a foot, extending lymphangitis, fever and poor clinical condition point to a septicemia, present or impending. The skin, muscles and bones are cut through in one plane and the wound allowed to remain without suturing. If this procedure brings about recovery then several days or a few weeks later a second operation, the usual low thigh amputation, is carried out.

Passive vascular exercise may be of value in embolism of a peripheral artery just as it is in non-diabetic individuals but our experience has shown it to be of little or no value in the slowly progressing arterial occlusion and the local thromboses of arteries and veins as commonly seen in diabetic patients. It should never be used when infection is present. Intermittent venous stasis as advocated by Collens<sup>4</sup> has not been given sufficient trial to warrant judgment as to its value. For patients confined to bed because of lesions in subacute or chronic stages, Buerger exercises are ideal particularly when combined with light exercises involving the use of the arm and shoulder muscles.

Following operations and particularly major amputations, patients should be allowed beds with Balkan frames and handles to allow movement in bed. Rubber draw sheets should be avoided. Patients should be turned every two hours, day and night, to avoid irritation of the skin over the back. The remaining foot should be covered with a woolen

sock and the heel kept from touching the bed by support from a small hair pillow placed under the distal part of the lower leg.

### COMMENT

The treatment of diabetes and its complications now claims a larger part of the time and thought of the physician than ever before. Even during the last five years, crude death rates (reflecting increased morbidity) have continued to rise. To a large extent this is due to the increasing length of life in the general population, thereby raising the proportion of older persons, especially women, in this and other countries. More and more persons are living into the age zone in which diabetes is most common. Furthermore, with insulin the diabetic patient lives longer so that now his life expectancy approaches nearer and nearer that of the non-diabetic individual. Insulin has given life to the juvenile and adolescent diabetics and made it possible for them later to marry and have children. There are now probably a half million diabetic persons in the United States.

Our responsibility to these patients and in turn our satisfaction and pleasure in their care are all the greater because of the fact that with careful treatment essentially normal health (for the age of the person concerned) can usually be restored. Whatever the cause of diabetes may be, whether within or outside the pancreas, the fact remains that restriction of diet and the supplying of an appropriate amount of insulin transform the patient into an essentially normal individual.

Since at present diabetes is controllable but not curable, it is our further responsibility to instruct patients regarding their disease and its possible complications. Thus, although we do not understand fully as yet the cause of premature arteriosclerosis, we can instruct middle-aged and elderly patients and their families regarding the proper care of the feet so that complications incident to the sclerosis of peripheral vessels may be avoided in so far as possible. Diabetes is a day-in-and-day-out, a lifetime condition; treatment and instruction must be planned accordingly and made simple, easily followed over years of time and yet thorough and inclusive.

### BIBLIOGRAPHY

1. Root, H. F. and Riseman, J. E. F.: The Exceptional Requirement of Insulin and Salt Solution in Diabetic Coma, *Journal of the American Medical Association*, 110, 1730 (May 21) 1938.
2. Hartmann, A. F.: Treatment of Severe Diabetic Acidosis; Comparison of Methods with Reference to the Use of Racemic Sodium Lactate, *Archives of Internal Medicine*, 56, 413 (September) 1935.
3. Pratt, T. C.: The General Management and Treatment of Obliterative Peripheral Vascular Disease of the Lower Extremities, *New England Journal of Medicine*, 216, 493 (March 25) 1937.
4. Collens, W. S., Wilensky, N. D., and Ginsberg, H.: Intermittent Venous Occlusion in Peripheral Vascular Disease. Study of its Physiologic Mechanism and Therapeutic Effects, *Archives of Physical Therapy*, 19, 261 (May) 1938.

## PELLAGRA IN KANSAS\*

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and

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Pellagra is not a rare disease in Kansas. From 1914 to 1936 the United States Public Health Service<sup>1</sup> reported 248 deaths from pellagra in Kansas. From 1928 to 1938 we observed forty-five patients with pellagra. Thirty-one of these forty-five patients resided in Kansas and the remainder resided in the neighboring states. Two of these patients died from the disease. Comparison of the United States Public Health Service mortality figures with our mortality rate and incidence strongly suggests that pellagra is much more common in this region than is generally recognized. Pellagra is easily overlooked in the midwest because its prevalence is not realized and because there are subclinical as well as very positive forms of the disease. As we became increasingly aware of the disease our incidence for the past four years surpassed that of the preceding six years.

### MATERIAL

Forty-two of these patients were females and three were males. They lived on farms or in small towns. Most of them were housewives or domestics. Twenty-seven of the patients had the mild or subclinical and eighteen had the severe or more readily recognized form of the disease. The age range was from twenty-eight to seventy-four. The average age of the patients with mild pellagra was fifty-two and with severe pellagra was forty-five years.

### ETIOLOGY

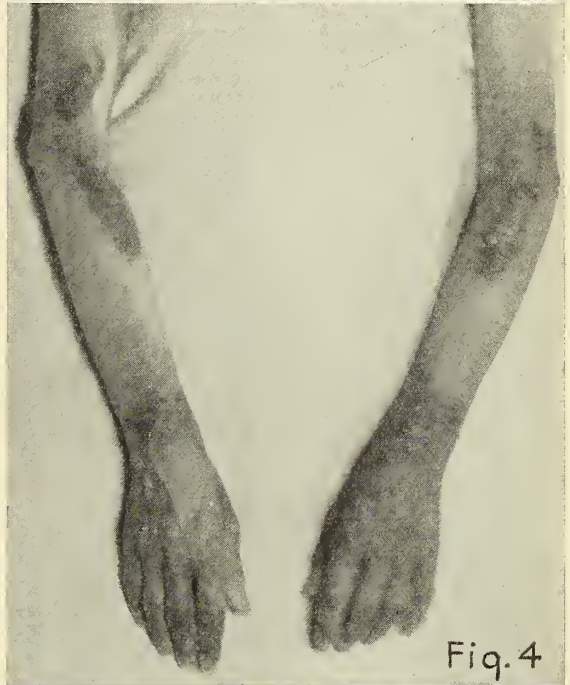
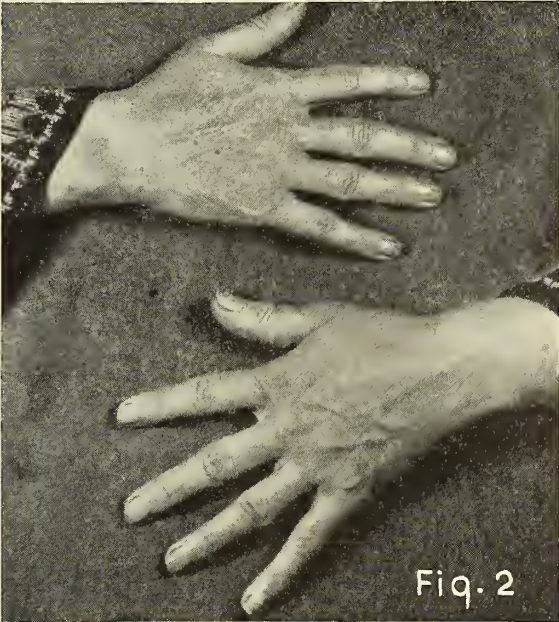
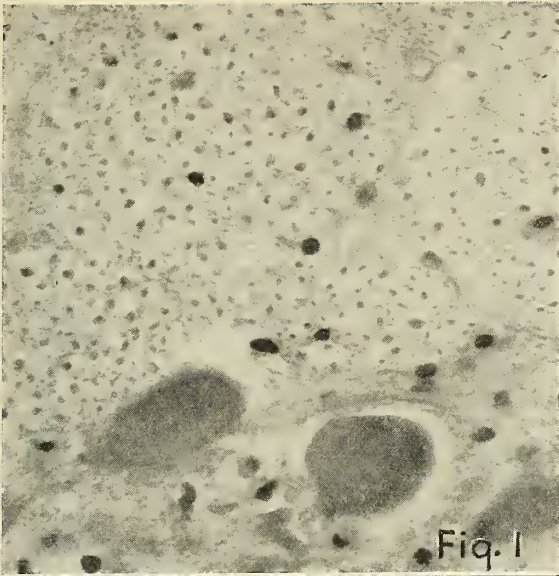
Pellagra in Kansas is not due to regional dietary deficiency. It follows the personal and persistent use of faulty diets, the use of therapeutic diets and pathological conditions that interfere with metabolism. The striking dietary deficiency was fresh meat. Achlorhydria was common and seemed to decrease the protective value of meat. Twenty-nine of these patients had a psychoneurotic background, three patients had primary gastro-intestinal malignancies or ulcerations, one had chronic nephritis, one had diabetes mellitus, five had used therapeutic diets and six lacked proper food balance because of finances. The therapeutic diets used were either the Sippy or the low protein diet.

### PATHOLOGY

An autopsy was obtained on one of the two patients that died from pellagra. This woman was fifty-

\*From the department of Neuropsychiatry of the Hertzler Clinic, Halstead, Kansas.





**Fig. 1.** Pellagra autopsy material. Cross-section of the spinal cord at the cervical enlargement. Shows area of posterior horn and posterior column, x 450. There is degeneration of the nerve fibers and the posterior horn cells.

**Fig. 2.** Dermatitis of mild pellagra. The skin of the dorsums of the hands is dry, brown, slightly thickened and scaly. There are lines of demarcation.

**Fig. 3.** Severe pellagra. There is marked papillary atrophy and redness of the tongue. The skin of the lower portion of the face is brown, thickened, dry, cracked and desquamating. An area of dermatitis may be seen on the neck.

**Fig. 4.** Dermatitis of severe pellagra. The skin of the hands and elbow regions is brown, thick, rough and shows cracks and desquamation. The greater portion is dry but there are moist areas.

**Fig. 5.** Dermatitis of severe pellagra. The skin of the feet and ankles is dry, rough, thick, reddish brown, cracked and desquamating.



seven years of age. She had been nervous and had nervous indigestion with anorexia for ten years. During the six months preceding her death, she had insomnia, was depressed and lost 35 pounds in weight. General weakness and ataxia appeared three months and the dermatitis on the exposed skin surfaces was observed two months before her death. When she was first examined on April 22, 1929, she was emaciated, pale, sallow, asthenic, confused, disoriented and emotionally unstable. The tongue showed a moderate grade of papillary atrophy, her pulse was eighty-four and blood pressure one-hundred systolic and sixty-five diastolic. The dorsums of the hands and the lower portion of the face were slightly red, rough, scaly and thickened. The vaginal mucosa was atrophic. The deep reflexes were absent and there was rather marked deep sensory loss. The anal sphincter tone was poor. She could not sit up or walk without assistance. The laboratory findings were not remarkable except for a moderate grade of anemia. While she was in the hospital, diarrhea appeared. The mental confusion and asthenia progressed. She went into coma on May 25, 1929 and died May 28, 1929. At autopsy the only positive findings were the atrophic glossitis and vaginitis, degeneration of the anterior and posterior horn cells and diffuse degenerative changes of the spinal cord tracts most marked in the posterior and lateral columns, Fig. 1. It was of interest that pellagra severe enough to cause death produced relatively insignificant skin changes.

### SYMPTOMS

The symptoms of pellagra are multiple. We compiled from the histories of these patients the complaints most common to the entire group, Table 1. In the event there was a coexisting disease the symptoms were colored by its presence. Acute exacerbations followed surgery, gestation, shocks, grief, and intercurrent acute illnesses. Exacerbations occurred in all seasons but were most common in the spring and fall.

The course of the uncomplicated mild case was chronic and was usually preceded by a psychoneurosis. The patients with mild or subclinical pellagra usually seek relief because of nervousness, weakness and abdominal distress. Their appetites and diets are poor. They have a vague sense of gas and distress in the epigastrium somewhat relieved by eructation. Indefinite and variable nervous symptoms, general weakness, vertigo, insomnia, soreness of the tongue and irregularity of the bowels occur frequently. At intervals the exposed skin surfaces become dry, brown, thickened and scaly. During the quiescent stage no more than local skin atrophy and increased pigmentation may be seen. About half of these patients have or have had mental confusion, numbness

and tingling of the feet and fingers, vaginal tenderness, pruritus, burning, soreness and discharge and frequent burning urination. Without treatment these symptoms vary but gradually become more severe.

Severe pellagra may run a chronic but usually follows a subacute and occasionally a fulminating course. One of these patients died in the sixth month of the disease. The common entrance complaints are skin lesions, nervousness and diarrhea. The symmetrical dermatitis on the exposed skin surfaces is usually marked. The skin lesions may be acute, red, rough, thickened, raw and blistered. The acute dermatitis never lasts more than a few weeks. It is followed by a brownish, thickened, cracked and sometimes crusted skin. This latter dermatitis may appear without a previous acute stage. These patients are often restless, irritable, flighty and have difficulty in concentration. They have insomnia, headache, vertigo, general weakness and numbness, tingling and awkwardness of their hands and feet. The episodes of mental confusion are frequent and severe. The outstanding mental reaction is an acute confusional psychosis or delirium with noisiness, restlessness, disorientation, active delusions of persecution and occasionally hallucinations in the visual and auditory fields. They may be depressed. Diarrhea is common, appears early, rather rapidly becomes severe and alternates with constipation. They have had poor and irregular appetites and diets. Burning, tenderness and itching of the vagina associated with an irritating discharge is quite common and may be the chief complaint.

### FINDINGS

The nutritional state of the patients with mild pellagra was fairly good. They were nervous, irritable, asthenic, restless, emotionally unstable and inclined to have transitory episodes of mental confusion. The reactions of the pupils were sluggish. The visible mucous membranes tended to be atrophic. The variations in this atrophy were considerable. The papillary atrophy of the tongue might involve only the tip or the margins. They had moderate cardiovascular instability. Their abdomens were diffusely tender and spastic. The exposed skin surfaces were usually dry, rough, brown, thickened and often presented cracks and scaling, Fig. 2. They had active reflexes, normal sensations and intact sphincters.

The patients with severe pellagra were malnourished. They were very nervous, restless, often incoherent and frequently were unable to give a history because of mental confusion. In this confusion they were disoriented, fearful, noisy and uncooperative. The pupillary reactions were sluggish. Their speech was thick. The tongue was atrophic, Fig. 3, and the throat was red and dry. The gingivae were spongy and red. Cardiovascular instability was marked. The pulse rates and pulse pressures were increased. The



TABLE I

Symptoms	Severe cases per cent	Mild cases per cent
Skin lesions .....	100	81
Nervousness .....	99	90
Gas .....	83	52
Weakness .....	80	89
Insomnia .....	80	60
Confusion .....	67	52
Headache .....	67	33
Sore tongue .....	61	33
Vertigo .....	56	78
Diarrhea .....	50	48
Constipation .....	38	37
Abdominal distress .....	50	48
Diet—no meat .....	50	30
Diet—little meat .....	2	7
Diet—irregular .....	37	15
Vaginal paresthesia & discharge	45	30
Nausea and vomiting .....	45	30
Numbness and tingling .....	34	48
Burning skin .....	34	15
Restlessness .....	34	56
Anorexia—marked .....	45	44
Anorexia—moderate .....	5	11

abdomens were flat or distended, diffusely tender and quite spastic. Vaginal mucosa atrophy was common and was associated with hyperesthesia. The exposed skin surfaces were moist or dry, reddish or brown, presented cracks, oozing, blisters, thickening and desquamation, Figs. 4 and 5. There was general weakness. The reflexes often were hyperactive but with marked decrease in the deep sensations, the knee jerks and tendoachilles reflexes were absent. Babinski's sign was absent. Some of the patients had poor sphincter tone and control.

#### LABORATORY FINDINGS

A reliable laboratory test for pellagra is lacking. The decolorization of lugol's solution by the blood<sup>2</sup> was present or positive in sixty-five per cent of the twenty-three patients tested. Six of the seven tests made on patients with severe pellagra were positive. The free hydrochloric acid was below thirteen in twenty-seven per cent of the mild and eighty-five per cent of the severe cases. The gallbladder of one of three patients did not visualize on the Graham-Cole test. Barium meals of fifteen patients showed ten normal and five with partial pyloric obstruction. Three of these obstructions were from functional spasm, one from the scar of an old ulcer, and one from a carcinoma. Ten barium enemas showed seven normal, one spastic and one atonic colitis and one carcinoma of the transverse colon. The urine was usually normal. Secondary anemia was common and in the clinical group was moderately severe. Blood

Wassermanns and spinal fluid findings were uniformly normal.

#### DIFFERENTIAL DIAGNOSIS

Our differential diagnostic problems included psychoneurosis, thyrotoxicosis, primary anemia, syphilis, primary gastro-intestinal tract lesions and the major psychoses. Psychoneurotics can and often do progress to pathological malnutrition and in the event that the metabolic fault leads to pellagra, the symptoms are interwoven. In the mild cases, the tongue atrophy, gastric content changes and the skin lesions may be slight and the diagnosis of pellagra debatable. Here the clinical response to treatment for pellagra is a diagnostic point. In the severe cases the nervous, mental, mucosa, skin and gastric content changes are pronounced enough to allow little argument, even though the background of the situation may have been a psychoneurosis. Thyrotoxicosis with its rapid pulse, high pulse pressure, nervousness, mental change and weight loss presents a difficult differential diagnostic problem at times. The patients with hyperthyroidism may have bronzed skin. The presence of a goiter, with a greater degree of cardiovascular instability, increased basal metabolic rate, the character and location of the dermatitis and lack of mucosa or gastric content changes simplifies this problem. Primary anemia occasionally simulates pellagra. The blood picture differentiates them. Syphilis must be excluded by the serology. X-ray examinations are frequently necessary to exclude a primary gastro-intestinal tract lesion as the cause of the nutritional fault. Patients with a major psychosis, especially manic depressive psychosis and schizophrenia are often subjected to faulty diets because of the mental condition, but the chronological history is very valuable in the differential diagnosis. The psychosis of pellagra is a disorganized confusional state associated with gastro-intestinal and skin changes which are less pronounced but not rare in the major psychoses.

#### PROGNOSIS

Two of these patients died from pellagra and two died from gastro-intestinal carcinomas. The patients with severe pellagra usually made a good recovery from the disease in about a year and their experience was sufficient to make them continue their treatment to prevent relapses. The mild pellagras improved within a few months but they had difficulty in maintaining an adequate diet and they often had minor relapses.

#### TREATMENT

The treatment must include a balanced high caloric diet with plenty of beef and liver. Fruit juices may be helpful. Liver extract orally or parenterally should be used. Brewers yeast as yet is the

most satisfactory source of vitamin B and should be given in doses up to a heaping tablespoonful three times daily. Dilute hydrochloric acid is of value especially for the control of vertigo and diarrhea. Nicotinic acid may be helpful but to date its dependability is too questionable to include it as a major part of the therapy. Small blood transfusions are occasionally necessary. If the skin is moist, mild astringent packs are needed and if it is dry, ointments with an oil base are used. Symptomatic care and sedation are essential.

### SUMMARY

Pellagra occurs in Kansas. During the past ten years we have observed forty-five patients with pellagra. Thirty-one of these patients were native Kansans. Twenty-seven had the mild type and eighteen had the severe type of the disease. Forty-two of the patients were females. The most common background of the illness was psychoneurosis. The pellagra was secondary to primary gastro-intestinal lesions in three instances. The symptoms and findings of typical pellagra are subject to marked variations. Four of these patients have died, two from the disease and two from gastro-intestinal carcinomas. Remissions usually followed adequate therapy but relapses were difficult to avoid if the patient failed to maintain a balanced diet. Treatment of the pellagra does not eliminate an underlying psychoneurosis.

### REFERENCES

1. Bulletins of the U. S. Public Health Service, The Notifiable Diseases 1914-1936.
2. Campbell, C. H. Rapid Decolorization of Iodine by Blood—Preliminary Report, American Journal Medical Science, August 1933, 186: 266-270; May 1937, 193: 658-660.

## A FEW OBSERVATIONS IN FORTY-NINE CASES OF EPIDEMIC PAROTITIS

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During the school year of 1937-1938, we observed forty-nine cases of mumps (epidemic parotitis) during their entire two weeks' quarantine period. The temperatures, white blood and differential counts and complications in these cases are presented in this report. As far as we can ascertain there have not been any studies of this nature presented in the American literature during the past ten years, and even more than two decades ago Feiling<sup>1</sup> stated, "Few observations appear to have been made on the blood in mumps, and the subject is not even men-

tioned in most text books."

The first case appeared on December 1, 1937, and the last one on May 25, 1938. There were thirty-four males and fifteen females, or a ratio of approximately two to one.

One hundred white blood cell and differential counts were done on the forty-nine patients. Each patient had at least one white blood cell and

TABLE I

W. b. c. per cubic millimeter	Number of counts
4000- 5000	2
5000- 6000	15
6000- 7000	11
7000- 8000	19
8000- 9000	6
9000-10000	10
10000-11000	12
11000-12000	4
12000-13000	6
13000-14000	1
14000-15000	6
15000-16000	1
16000-17000	2
17000-18000	2
18000-19000	2
22000-23000	1

Table I shows the relationship between the number of counts and the number of white blood cells per cubic millimeter.

differential count; twenty-three patients had one count, eleven patients had two counts, nine patients had three counts, three patients had four counts, two patients had five counts, and one patient had six counts. The lowest white blood cell count was 4100, and the highest 22,000 per cubic millimeter. Table I shows the grouping of the counts per cubic millimeter. It can be seen that seventeen per cent had a

TABLE II

Neutrophile (%)	30	40	50	60	70	80
Lymphocytes (%)	70	60	50	40	30	20
Number of blood counts	2	10	18	47	17	6

Table II shows the range of the differential count.

subnormal count, 4000-6000; thirty per cent had a normal count, 6000-8000; twenty-eight per cent had a mild leucocytosis, 8000-11,000; and twenty-five per cent had a moderate to severe leucocytosis, above 11,000. These findings agree in part with those of Feiling, who concluded in a review of forty-two cases that there was a slight increase in the total number of leucocytes.

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TABLE III

Day of quarantine period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 and above
Number of elevated temperatures	24	27	17	11	4	7	3	8	9	10	4	2	1	1	7

Table III denotes the relation of the number of elevated temperatures to the quarantine period day.

Table II shows the relationship between the polymorphonuclear cells and the lymphocytes, and reveals that in more than seventy-five per cent of the cases there was a lymphocytosis. Feiling in his forty-two cases found a lymphocytosis which was both relative and absolute. The finding of a lymphocytosis was a valuable aid to us in the differential diagnosis of a unilateral parotid swelling, where the etiological factor could have been due either to an infected tooth or epidemic parotitis. Feiling concluded that the changes in the blood were of distinct diagnostic value in differentiating mumps from other inflammatory swellings of the parotid or submaxillary glands.

Seven of the patients did not have an appreciable febrile reaction, i.e. 99.6 degrees or over, while forty-two did. Table III indicates the relationship between the quarantine period day and the number of elevated temperatures. It will be noted that the greatest number of elevated temperatures occurred during the first four days. The highest temperature found was 104.8 degrees in a case complicated by orchitis.

Ten or 29.4 per cent of the males developed orchitis. This complication was found by Cecil<sup>2</sup> in fifteen to thirty per cent of cases and by Hemplemann<sup>3</sup> in fifteen to twenty per cent. Dukes<sup>4</sup> found that in a series of twenty-three patients, orchitis occurred in 37.5 per cent of the cases. There did not seem to be any definite time in the quarantine period for the development of this complication, since in several of our cases the orchitis was present at the onset of the parotid swelling, in a few the orchitis developed after the parotid swelling had begun to recede, and in one case the orchitis developed one week after the patient was released from quarantine. Chauvin<sup>5</sup> reviewed a series of sixty-five cases and found that the orchitis could develop from the third to the eighteenth day of the disease. Contrary to the opinion that orchitis seldom occurs in patients who are kept in bed a full week, Dukes found that in a series of thirty cases, twenty per cent developed orchitis, though all had been confined to bed for eight days. All of our patients were kept fully confined to bed for at least ten days, yet in five the orchitis developed from the third to the seventh day of the quarantine period.

In our cases complicated by orchitis the average white blood cell count was 9,802 per cubic millimeter, and the relationship between the polymorphonuclear cells and the lymphocytes is shown in Table IV. Here again we find a lymphocytosis. Feiling found that orchitis does not invariably alter the blood picture, and we concur with this author.

### SUMMARY

1. Forty-nine cases of epidemic parotitis were reviewed in respect to white blood cell and differential counts, temperature range and complications.
2. One hundred white blood cell counts were done. Seventeen per cent had a subnormal count, thirty per cent had a normal count, twenty-eight per cent had a mild leucocytosis, and twenty-five per cent had a moderate to severe leucocytosis. In seventy-five per cent of the cases there was a lymphocytosis.
3. The greatest number of elevated temperatures occurred during the first four days of the quarantine period.

TABLE IV

Neutrophile (%)	30	40	50	60	70	80
Lymphocytes (%)	70	60	50	40	30	20
Number of blood counts	1	3	6	11	2	1

Table IV shows the range of the differential count in ten cases of orchitis.

4. Ten or 29.4 per cent of the males developed orchitis. (a) The average white blood cell count was 9,802 per cubic millimeter, and a lymphocytosis was the rule. (b) Orchitis was found to occur at any time during the quarantine period.

In conclusion it may be noted that the findings in this series of cases corroborate those which have been found to be characteristic of epidemic parotitis.

### BIBLIOGRAPHY

1. Feiling: Mumps, a Critical Review, Quarterly, Journal of Medicine, 1915, 8, 257.
2. Cecil: A Textbook of Medicine, p. 302-6, 1934.
3. Brennemann: Practice of Pediatrics, Vol. II, Chapter XIII, 1938.
4. Dukes: The Orchitis of Mumps, Lancet, London, 1900-125; *ibid*, 1906 i 861.
5. Chauvin: De l' epidymite ourlienne: These pour M.D. Paris 1900.

## PARALYTIC ILEUS

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The experimental work done on intestinal obstruction and paralytic ileus has been a help in determining the treatment of these conditions and has made it possible for the surgeon to give a more favorable and accurate prognosis.

Hartwell and Houger<sup>1</sup> demonstrated that animals with obstruction could be kept alive for long periods of time by the administration of large amounts of normal saline solution. Haden and Orr<sup>2</sup> further showed that there was a decrease in the blood chlorides and a rise in the carbon dioxide combining power in obstruction and by the administration of normal saline and glucose, the blood chlorides could be held up and acidosis decreased. Moon and Morgan<sup>3</sup> have shown that an extract from the mucosa from the obstructed intestine produces a marked fall in blood pressure. The absorption of toxins in intestinal obstruction is a factor in the production of death<sup>21</sup>.

Murphy and Brooks<sup>4</sup>, Schumacher and Wattenberg<sup>5</sup>, Gatch, Trusler and Ayres<sup>6</sup>, Dragstedt<sup>7</sup> et al, demonstrated experimentally that strangulation favors the absorption of toxic material from the intestinal lumen and that in experimental closed loop obstructions, the shorter the loop, the more rapid is the intoxication.

Enderlen and Hotz<sup>9</sup>, Braun and Boruttau<sup>10</sup>, Esau<sup>11</sup>, and Heusser and Schar<sup>12</sup> state that absorption from the intestine is decreased as soon as the obstruction begins. Muller<sup>13</sup> showed that in ileus there is an increased secretion into the gut lumen. Morton<sup>14</sup> found that in obstruction there was greater pressure within a loop of the duodenum than one of the lower ileum, and that the duodenum secreted from five to ten times as much fluid as the ileum in a given period of time. Obstruction high in the intestinal tract has a greater mortality than that of the lower bowel. Dr. R. L. Santa<sup>8</sup> inserted balloons into the rectum and lower bowel and inflated them with air, and produced pain, nausea, feeble pulse and clammy sweat (shock) by over distention of the bowel. Therefore, distention of the bowel in intestinal obstruction is also a factor in the production of shock and death.

Waggensteen<sup>15</sup> with the Levin tube and constant negative pressure was able to remove the fluid from the stomach and small intestine. The distention was relieved, toxic material removed and edema at the obstructed area decreased.

Waggensteen<sup>18</sup> and Ochsner<sup>19</sup> have shown that the x-ray is a benefit in the differential diagnosis of the ileus and strangulated obstruction. Seed, Falls

and Fantus<sup>16</sup>, stated that the routine use of pitressin before and after laparotomies was not notably beneficial.

Abbott and Johnston<sup>17</sup> report the use of a two lumen tube, or two tubes tied together, (one used for suction and one for inflating a small balloon) in the treatment of intestinal obstruction. The tube is passed down to the obstructed area and by the injection of small amounts of barium sulphate suspension, the nature of the obstruction can often be determined. In some instances the decompression alone has released the obstruction rendering operation unnecessary.

The Wangensteen apparatus, the Tomac Gastro-Evacuator, and the above apparatus were used on the following cases.

The following cases are reported to show that in paralytic ileus, the bowel may fail to function normally for five days with no passage of gas or fecal material during that time, and then pass gas and the bowels move two or three times and the intestines resume their normal function;

Case No. 1—K. L. Female, age fifty-two.

10-2-36—Operated for perforated gangrenous appendicitis.

10-8-36—Levin tube inserted (negative pressure) because of abdominal pain, distention, and no relief from enema.

10-13-36—Medium amount of soft stool and flatus expelled.

10-14-36—Levin tube removed.

10-15-36—Large amount of liquid stool with flatus expelled. Uneventful recovery, and no further surgery required.

Case No. 2—Z. M. S. Female, age nineteen.

11-20-37—Operated for acute gangrenous appendicitis.

11-25-37—Levin tube inserted (negative pressure) because of abdominal pain, distention and vomiting. Colon tube was inserted, no flatus returned.

12-1-37—Flatus passed, and large amount of liquid brown stool.

12-1-37—Levin tube removed. Uneventful recovery.

Case No. 3—H. D. Male, age forty.

9-13-35—Operated for acute gangrenous appendicitis.

9-13-35—Levin tube inserted (negative pressure) because of vomiting and distention.

9-16-35—Liquid stool and flatus passed.

9-16-35—Levin tube removed. Uneventful recovery.

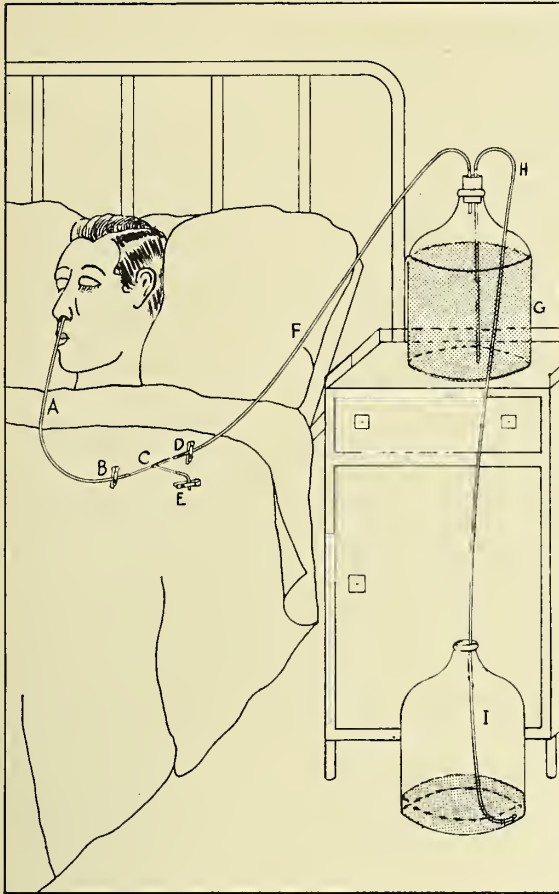
Case No. 4—J. P. Female, age fifty.

12-18-35—Operated for obstructed gall bladder with perforation.



12-18-35—Levin tube inserted (negative pressure) because of distention pain in the abdomen and vomiting.

1-1-36—Levin tube removed. Uneventful recovery.



A—Levin tube.  
B, D, & E—Clamps making it possible to start the suction or clean the Levin Tube without disturbing the rest of the apparatus.  
C—Glass T-tube.  
F—Rubber tube connecting glass T-tube to the bottle.  
G—1 gallon bottle with rubber cork having two holes.  
H—Four-foot rubber tube for suction from upper bottle to lower bottle.  
I—1 gallon bottle containing small amount of water.

Case No. 5—D. C. P. Male, age forty.

6-24-35—Pyloroplasty for gastric ulcer.

6-24-35—Levin tube (negative pressure) inserted when awake.

6-29-35—Soft formed stool and flatus passed.

6-29-35—Levin tube removed. Uneventful recovery.

Case No. 6—F. G. Male, age fifty-four.

3-11-37—Gastro-enterostomy for carcinoma of the stomach.

3-11-37—Levin tube inserted when awake (negative pressure).

3-16-37—Liquid and formed stool after enema.

3-16-37—Levin tube removed. Uneventful recovery. No further surgery has been required at this time.

Case No. 7—V. L. Female, age twenty-two.

4-7-37—Entered hospital with pelvic peritonitis.

4-7-37—Levin tube inserted (negative pressure) because of abdominal distention, pain in abdomen and vomiting.

4-11-37—Liquid and formed stool passed.

4-11-37—Levin tube removed. Uneventful recovery.

Case No. 8—W. J. S. Female, age thirty-eight.

3-14-37—Cholecystectomy.

3-14-37—Levin tube inserted when awake (negative pressure).

3-20-37—Flatus and liquid and formed stool passed.

3-20-37—Levin tube removed. Uneventful recovery.

Case No. 9—B. E. Male, age thirteen.

9-13-37—Admitted to hospital with peritonitis (perforated appendicitis).

9-18-37—Appendiceal abscess drained.

9-20-37—Levin tube inserted (negative pressure) because of severe abdominal cramps, distention and vomiting.

10-28-37—Small liquid stool and flatus passed.

10-31-37—Levin tube removed.

11-2-37—Levin tube re-inserted because of severe abdominal pain, distention and vomiting.

11-7-37—Liquid stool and flatus passed.

11-7-37—Levin tube removed.

11-9-37—Appendectomy (organic intestinal obstruction (adhesive band (freed).

11-9-37—Levin tube re-inserted (negative pressure) when awake from surgery.

11-13-37—Small liquid stool and flatus passed.

11-13-37—Levin tube removed. Uneventful recovery.

## CONCLUSION

There is experimental evidence that lowering of the blood chlorides and acidosis, absorption of toxins from the obstructed area and above, and distention of the bowel play a part in the production of death in paralytic ileus and intestinal obstruction. In paralytic ileus, the bowel may fail to function normally for five days and then resume its normal function and no abdominal surgery for the ileus is required. If the suction does not give relief, or if the use of the tube has to be repeated, early surgery should be seriously considered<sup>20</sup>.

## BIBLIOGRAPHY

1. Hartwell, J. A. and Houget, J. P.: Experimental intestinal obstruction in dogs with especial reference to the cause of death and the treatment by large amounts of normal saline solution. *Journal American Medical Association*, 1912, 59, 92, 87.
2. Haden, R. L. and Orr, T. G.: Obstruction of the jejunum; effect of sodium chloride on the chemical changes in the blood of the dog. *Archives Surgery* 1925, 11, 950-882.
3. Moon, V. H. and Morgan, D. R. Schock; Mechanism of death following intestinal obstruction. *Archives of Surgery*, 1936, 32, 776-788.
4. Murphy, F. T. and Brooks, B.—Intestinal obstruction; an experimental study of the causes of symptoms and death. *Archives Internal Medicine* 1915, 15, 392-412.
5. Schumacher, H. W. and Wattenberg, J. E.: Intestinal Obstruction; experimental study. *Annals of Surgery*, 1917, 67, 210-214.
6. Gatch, W. D., Trusler, H. M. and Ayres, K. D.: Causes of death in acute intestinal obstruction; clinical applications and general principles of treatment. *Surgery, Gynecology and Obstetrics*, 1928, 46, 332-337.
7. Dragstedt, L. R., Dragstedt, C. A., McClintock, J. T. and Chase, et al.: Study of the factors involved in production and absorption of toxic materials from intestines. *Journal Experimental Medicine* 1919, 30, 109-121.
8. Ochsner, Alton: Physiologic considerations of Ileus. *The Journal of Roentgen and Radium Therapy*, 1937, 37-433-445.
9. Enderlen and Hotz: Ueber die Resorption bei Ileus und Peritonitis. *Mitt. a.d. Grenzgeb. d. Med. u. Chir.*, 1911, 23, 755-864.
10. Braun, W. and Boruttau, H.: Experimental-Kritische Untersuchungen uber den Illeost. *Leutsche Ztschr. f. Chir.*, 1908, 96, 544-597.
11. Esau, Ueber einen Fall von spontaner Ausscheidung einer Dunndarmschlinge nebst Bemerkungen zur Frage des Ileus. *Arch. f. klin. Chir.*, 1910, 92, 155-171.
12. Heusser, H. and Schar, W.: Untersuchungen uber die Resorption beim Ileus. *Beitrag. z. klin. Chir.*, 1931, 153, 548-558.
13. Muller, E. F. Ueber den paralytischen Ileus. *Mitt. a. d. Grenzgeb. d. Med. U. Chir.*, 1929, 41, 417-442.
14. Morton, J. J. and Sullivan, W. C.: Comparison between simultaneous equal-sized closed obstructions of duodenum and ileum. *Archives of Surgery*, 1930, 21-531-538.
15. Wangenstein, O. H. and Paine, J. R.: Treatment of acute intestinal obstruction by suction with a duodenal tube *Journal American Medical Association* 1933, 101, 1532-1539.
16. Seed, L., Falls, E. H. and Fantus, Bernard: Pitressin in Laparotomies, *Surgery, Gynecology and Obstetrics*, 1937, 64, 985-905.
17. Abbott, W. O., Johnston, C. G.: Intubation studies of the human small intestine. *Surgery, Gynecology and Obstetrics*, 1938, 66, 691-697.
18. Wangenstein, O. H.: Therapeutic considerations in the management of acute intestinal obstruction. *Archives of Surgery*, 1933, 26, 933-961.
19. Ochsner, A.: X-ray diagnosis of ileus; value of roentgenograms in simple and strangulated obstruction; experimental study. *Surgery, Gynecology and Obstetrics*, 1933, 56, 719-727.
20. Cox, W.: The Levin Tube. *Journal Kansas Medical Society*, July 1934 Vol. 35 No. 7.
21. Hibbard, J. S.: Effect of the Volatile Base in Fluid Intestinal Contents on Dogs with Low Intestinal Obstruction. *Surgery*, March 1938, Vol. 3, No. 3, 325-333.

## CONVULSIVE SHOCK THERAPY IN THE INVOLUTIONAL PSYCHOSES

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The involutional psychoses may be defined as those abnormal mental states which seem to develop in the involutional (the decline) period of life that have no background of cerebral pathology, such as syphilis or arteriosclerosis. Since the predominant symptom is depression with melancholia, the term "melancholia" was used first by Kraepelin<sup>1</sup>, who described it as involutional or pre-senile process. This is the concept today, although it has been attacked in the past. There is a new concept de-

veloping which may in the end eliminate the involutional element from the group and classify all melancholias, regardless of age, into one classification. It is already preferable for some purposes to use the term "agitative-depressive psychoses" in speaking of the melancholias of this group and both the younger and older age groups which either have not started through the involutional period of life or which have already passed through it.

The qualifying word "agitative" is used because the second important symptom is apprehension with agitation. This symptom is almost always found in these cases, and is frequently mistaken for mania.

We have attempted to define simply and briefly the type of case that is particularly affected by a new treatment approach. We may say that any case of depression without maniacal interludes should receive the treatment, and it is particularly indicated in both men and women between the ages of forty and seventy who have a mental condition with a high emotional content that is not due to syphilis, arteriosclerosis or other organic diseases.

When Sakel<sup>2</sup> and von Meduna<sup>3</sup> proposed insulin and metrazol shock respectively for the treatment of schizophrenia (dementia praecox), it seemed that at last psychiatry had had placed in its hands a new specific treatment for a heretofore untreatable condition. Reports continued to be confirmatory of the efficiency of the treatments, although no one has duplicated the original results. However, the treatments are established, and with moderate restrictions have a wide indication.

It is only natural that, with the good results in one type of functional disease of the nervous system, other chronic mental disorders would be treated by these methods. In the condition under discussion, Bennett<sup>4</sup> was apparently the first investigator to make a report of the use of metrazol on a suitable series of cases. His first series of ten has now reached 35<sup>5</sup>. He reports good results in the agitative-depressive psychoses, some of his patients being sixty-five years of age. All of these patients were treated with metrazol convulsive shock after some of the early cases had been treated with insulin with no results.

The staff of the Neurological Hospital has now treated ten patients of the agitative-depressive type with metrazol convulsions, six women and four men. The youngest was thirty-six and the oldest seventy-three. Eight patients made an excellent improvement and are now back in their former occupations or at home attending to their household duties. One is much better, but has some defects. The other case showed improvement, but relapsed. She received no further treatment.

The simple statement that eight out of ten cases



made an excellent recovery is hardly sufficient to illustrate the value of the treatment. Of these eight cases, four were women and four were men. The women had had agitation with depression for an average of one year before admission. They had all had thorough treatment with massive doses of theelin and they had all become progressively worse while taking the glandular treatments. They had reached the point where loss of weight was endangering their lives and the problem of insomnia was acute. They were patients who had only a future of custodial institutionalization to which to look forward. The men were likewise chronic. There had been no glandular extracts used on these patients, but they had reached the stage of depression and loss of confidence where they likewise had no future.

Kraepelin<sup>1</sup> said that thirty per cent of the cases of melancholia would have a spontaneous remission in time. The rest would never recover. It has been our experience that those patients who had a spontaneous remission were hospitalized for from six to eighteen months. The eight patients in our series averaged six weeks in the hospital, one week for preliminary examination, four and one-half weeks under treatment, and three to seven days' observation after the treatments were finished.

The treatments are given at intervals of from two to four days, depending on many clinical factors. Each treatment consists of the injection of from four to ten cc of metrazol intravenously, which is quickly followed by a generalized convulsion lasting about one minute. Following this there is a period of restlessness followed by relaxation and usually sleep. From six to ten treatments are given to each patient.

A convulsion is usually a terrifying thing, and many people consider that there is great danger connected with the treatment. This apparently is not true. None of our patients showed any signs of serious physical complications. Two cases had a rather severe myocardial disease, and repeated electrocardiograms showed that there was little effect upon the heart as a result of the convulsions.

There has been an occasional death from metrazol reported. No statistics of the mortality rate have as yet been compiled. It is probably about as dangerous as an operation for uncomplicated appendicitis. Every worker in this field feels that the treatment is justified in the face of apparent chronicity, a common outcome of all cases of agitative-depressive psychoses.

The patients should be given every opportunity to get well under former methods of treatment. Gland extracts, diet support and controlled rest should be tried. But if after a few weeks these methods have failed to bring about improvement, the physician

must realize that he is more than likely faced with a chronic problem and other plans should be made. Metrazol convulsive shock is probably indicated.

### SUMMARY

Metrazol convulsive shock therapy is indicated in patients with melancholia, depression and agitation as the principle symptom complex.

The cases do not have to be severe before the treatment is started. It is best to start treatment as soon as it is seen that gland therapy and supportive therapy have not brought about a noticeable improvement.

Metrazol therapy acts quickly. Long hospitalization periods are cut to a few weeks.

Metrazol therapy is not dangerous in experienced hands if every possible precaution and safeguard are taken.

### BIBLIOGRAPHY

1. Kraepelin: Lectures on Clinical Psychiatry, Wm. Wood and Company, 1913.
2. Sakel, Manfred: Wien. med. Wchnschr. 84:1211 (November 3) 1934, and many others.
3. von Meduna, L.: Ztschr. f. d. ges. Neurol. u. Psychiat. 152: 235, 1935.
4. Bennett, A. E.: American Journal Medical Sciences 196:420, 1938.
5. Bennett, A. E.: Personal Communication.

## TRANSFUSION OF TYPES 1, 2, AND 4 BLOOD INTO A TYPE 1 RECIPIENT\*

Maurice A. Walker, M.D.,

Marie Carr, A.B.,

Kansas City, Kansas

and

Glenn A. Pearson, M.D.,

De Soto, Kansas

Blood of type 4\*\* from "universal donors" is regularly transfused into patients having blood of any of the other three types. It is not so often kept in mind that patients whose blood is type 1 may safely receive blood of any of the other types and be considered "universal recipients."

### REPORT OF CASE

A white woman, aged fifty-five, had a concentration of hemoglobin of thirty-four per cent following metrorrhagia from a carcinoma of the cervix. Her blood was type 1. Transfusions were done as in table I. The blood of the donor was cross matched with that of the patient before each transfusion to be certain that there was no agglutination of the cells of

\*From the University of Kansas School of Medicine.

\*\*Moss classification.

the donor. In no instance was there any subjective complaint indicating reaction to the transfusion nor was there any significant change in the temperature

TABLE I

October 1938	Type	Blood infused Volume, c.c.
4	1	400
5	2	500
6	2	400
	4	500
7	4	500
8	2	500
11	4	500

or pulse rate of the patient. The concentration of hemoglobin on October 12, after seven transfusions, was sixty per cent.

## INTESTINAL OBSTRUCTION DUE TO SUBMUCOSAL HEMA- TOMA OF THE JEJUNUM IN THE NEW-BORN

R. Philip Smith, M.D.\*

Kansas City, Kansas

Intestinal obstruction due to bleeding within the gut from various causes is not common but has been recorded in several instances. However, after a superficial survey of the literature, no case was found of intestinal obstruction due to a submucosal hematoma of the proximal jejunum in a new-born infant following operation. From October 15, 1914 to May 1, 1937, in a series of 6334 autopsies, no other case such as this was seen. The following case is a report of such an occurrence.

### CASE REPORT

N. L. E., a white female, was born October 18, 1936, of a full term primipara after an uneventful twenty hour labor. She weighed at birth eight pounds, one ounce, and after a routine physical examination was termed a normal, healthy baby. The first time water was given the infant, regurgitation and cyanosis were noted by the nurse. This was accompanied by a choking spasm. Oxygen therapy apparently relieved the symptoms which recurred each time food or water was taken. During the first forty-eight hours of life the child had numerous attacks, and retained no fluids by mouth. Late on the second day, a fluoroscopic examination was made to determine, if possible, if the thymus gland was enlarged. It was appar-

ently within normal limits but during the routine examination the roentgenologist gave the patient a spoonful of barium and noticed that the esophagus held the opaque medium at the level of the fourth rib and that none of the barium entered the stomach. A diagnosis of esophageal atresia was made.

On October 21, 1936, three days after birth, a gastrostomy was done under local anesthesia. This was deemed necessary so that the child could be fed directly into the stomach. A few hours after operation, feedings of not greater than one ounce were started and for a few hours were apparently being well tolerated. Feedings were increased to two ounces. On the first administration of the two ounce mixture, it was noted by the nurse in attendance that the material placed in the stomach was regurgitated, caused a coughing spasm and was apparently spit out by the patient. The one ounce feedings were again resumed but they also brought on the same reaction.

The child failed to improve following the operation, continued to have the periods of cyanosis, and died on the second post-operative day, and the fifth day of life.

### AUTOPSY REPORT

The body was that of a fairly well-nourished infant of approximately five days of age, showing a left rectus healing abdominal incision through which a hard rubber tube protruded. Figure 1.

Inspection of the peritoneal cavity revealed approximately twenty-five cubic centimeters of a blood-tinged fluid. A small hematoma was present around the tube at its point of entrance into the pyloric portion of the stomach. The stomach was moderately distended with fluid, as was the duodenum. The proximal jejunum to a point two centimeters below the terminal portion of the duodenum showed a blue discoloration for a distance of six centimeters. The proximal portion of this discolored area was sharply demarcated from the normal by a definite line around the intestinal segment and gradually blended into the adjacent intestine at the distal portion. This blue discolored area was semi-firm on palpation, giving the impression of a mass filling the intestine.

On opening the thoracic cavity, nothing of interest was noted. The lungs showed a consolidation of the lower lobes, with numerous, small, grey patchy areas suggesting a bronchopneumonia. The thymus gland weighed eight grams.

The esophagus was found to end in a blind pouch two centimeters below the level of the larynx. The lower portion of the esophagus was traced superiorly from the stomach and was found to enter the left posterior lateral aspect of the trachea eight millimeters above the bifurcation. The only remnant of a connection between the upper and lower portions

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of the esophagus was a thin, fibrous strand, one millimeter in thickness which extended from the inferior margin of the blind pouch to the junction of the esophagus and trachea.

Microscopic examination of the organs showed a typical bilateral bronchopneumonia. The heart, liver, spleen, pancreas, kidneys and internal genital organs were essentially negative.

Further examination of the intestine showed that a hemorrhage had occurred beneath the submucosal

cating between the upper end of the lower segment of the esophagus and the trachea. This anatomical finding demonstrates why the patient could not swallow food by mouth and also shows why food placed in the stomach through the gastrostomy tube was regurgitated through the mouth and caused spasms of coughing and periods of cyanosis.

2. A peculiar sharply defined submucosal hematoma of the proximal jejunum brought about complete obstruction of the upper intestinal tract. Thus, when food was passed into the stomach, not being able to pass down the intestinal tract in the usual manner, it was forced up the esophagus into the trachea.

It is difficult to state definitely the exact cause of the hematoma, but from the history and findings it is probably traumatic, due to manipulation of the intestines at operation.

It is concluded that the primary cause of death was due to a hematoma within the wall of the proximal jejunum completely obstructing the bowel at that point. The hematoma was apparently due to trauma incident to gastrostomy.

3. Other interesting findings were a congenital atresia of the esophagus, and a esophago-tracheal fistula. Food placed in the stomach was regurgitated through the fistula into the trachea and out through the mouth. Bronchopneumonia was apparently secondary to aspiration of gastric contents.

## OIL SOLUBLE ANESTHETICS IN THE TREATMENT OF ANAL FISSURE

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The purpose of this communication is to emphasize the use of the oil soluble anesthetics in the treatment of anal fissure. For many years the oil soluble anesthetics in contrast to the water soluble anesthetics have been used and advocated for many proctologic conditions, on account of their slow absorption from the tissues, with the resulting long anesthesia.

In 1930 Gorsch, introduced the oil soluble anesthetic anucaine\*, which he had modified from the first and original oil soluble anesthetic benacol, which was first described and used by him at the New York Polyclinic Hospital in conjunction with Mathesheimer and Yeomans for the treatment of pruritis ani. It was observed that anucaine produced a prolonged anesthesia with marked relaxation of the sphincter muscles and its usefulness in other proctologic conditions soon became apparent and the oil

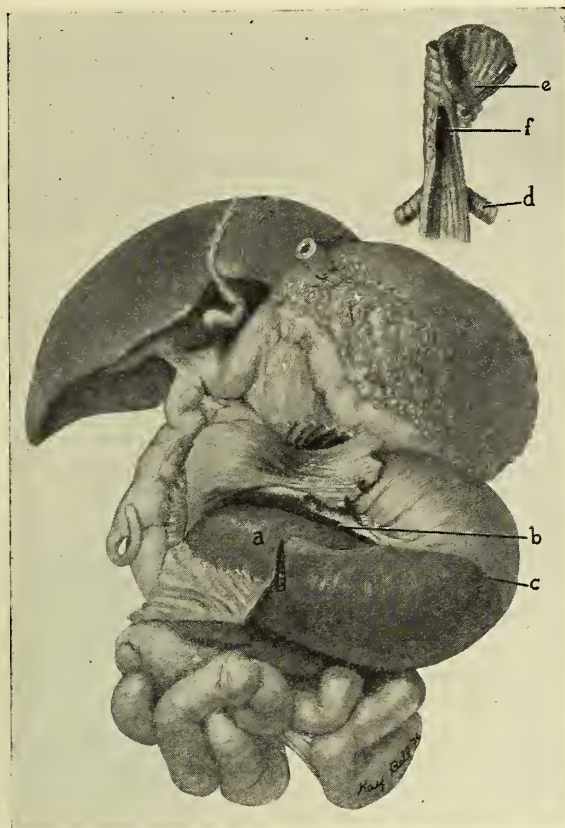


Fig. 1. Drawing showing hematoma of the proximal jejunum and congenital atresia of esophagus with esophago-tracheal fistula.

a, Mucous membrane of jejunum covering hematoma; b, wall of jejunum opposite hematoma; c, edge of hematoma showing through wall of gut; d, major bronchus; e, proximal blind end of the esophagus; f, opening of esophago-tracheal fistula.

layer of the jejunum, stripping this layer from the muscularis and pushing the mucosa into the lumen toward the mesenteric border completely obstructing the intestine at this point.

From the history and findings at autopsy, it is apparent that the patient's death was due to an unusual series of complications:

1. A congenital malformation of the upper gastrointestinal tract, the esophagus being obliterated two centimeters below the larynx and a fistula communi-

anesthetics have now found a place which is almost routine in the treatment of pruritis ani, also in hemorrhoids, fissure, cryptitis and papillitis.

Since the introduction of anucaine various similar preparations slightly modifying the original formula have been introduced as proctocaine, butecaine etc. etc. We have had no experience with these latter preparations having been very highly satisfied with anucaine. This anesthetic consists of five parts each of benzocaine and phenmethylo, one part of butylamono benzoate and one part of procaine base in almond oil.

There are scarcely any contraindications to the use of the oil soluble anesthetics but these will be pointed out in the following discussion.

The condition known as anal fissure, irritable ulcer, intractable ulcer, etc., is a common proctologic finding. The ulcer or fissure is usually situated beneath the ano-rectal line in the muco-cutaneous lining of the anus so that it may lie within the grasp of the anal muscular ring. Defecation results in trauma to the ulcer, is therefor associated with greater or less pain. Bleeding may also follow and this syndrome is followed by painful spasm of the sphincter muscles usually persisting after defecation until the sphincter mechanism relaxes as a result of exhaustion or other sedative measures. Failure of the ulcer to heal is a result of the constant action of the sphincter muscles—movement being increased by walking and other physical activity.

Because of their distress the less timid patients seek advice early and usually are observed more frequently by the general practitioner and general surgeon than by the proctologist. Many cases of fissure are treated by so called "office proctology methods" in which "ambulant technique", the operation without the knife, and no hospitalization are favorite selling points. Many are also treated by topical application of strong solution of silver nitrate which will form a thin coagulum sufficient to relieve the small acute ulcer but which may be followed by fibrosis. Divulsion under general anesthesia is becoming less popular and justly so because it traumatizes the delicate sphincter mechanism. Useless suppositories, ointments etc. are also commonly used. These methods are inadequate and often violate fundamental surgical principles. This accounts for the chronicity of fissure with its pathological secondary changes. It should be more generally appreciated that the fissure patient is a potential candidate for peri-anal suppuration as long as his fissure remains unhealed, his sphincter spasm persists and associated pathology (pectenosis—fibrosis of the anus; hemorrhoids, cryptitis, papillitis, peri-anal skin tabs) is not dealt with.

## ETIOLOGY

The cause of fissure in ano is still a matter of dispute. Pre-disposing factors as proctitis, hemorrhoids, constipation, cryptitis etc, are accepted but there is despite a voluminous literature on the subject, a question as to the exact mechanism of production of the ulcer and why it usually occurs posteriorly, less often anteriorly and rarely laterally unless the lesion be a specified one. The common conception is tearing of the anal muco-derm the result of trauma from passage of a hard stool which causes over-distension of the anal canal, the break occurring posteriorly where the rectum joins the anus at a right angle thus throwing the brunt of the expulsive force against the anus posteriorly. The relative fixation of the lining of the anus posteriorly also favors fissure in this location. The anterior fissure usually is seen in the female and frequently dates to parturition and perineal tear. The break in the anal lining is followed by repeated trauma and infection resulting in fibrosis and the chronic type of fissure. Regardless of the exact pathogenesis a sufficient number of conditions contribute to the etiology that the fissure patient demands a comprehensive digital and instrumental examination.

## TREATMENT

The treatment of fissure may be operative or non-operative and the practitioner must determine this on the extent of the presenting pathology. A working classification is to divide the fissure into the simple form in which there is only a break in the lining of the anal canal as is usually found early in the acute fissure; and the complicated or chronic form in which there is induration of the ulcer bed, the result of scar tissue, the sentinel pile due to hypertrophy of peri-anal skin, a result of inadequate drainage. Scarring, skin tab, severe spasm and the presence of other anal pathology as hemorrhoids, papillitis, cryptitis etc. require operative treatment. In treatment of either the simple or chronic fissure the injection of an oil soluble anesthetic, such as anucaine, is now a well established and recognized practice affording immediate relief and facilitating the subsequent treatment.

Simple fissure will usually respond to the injection of an oil soluble anesthetic followed by gentle dilation of the sphincter muscles and sparking of the surface of the ulcer with the Oudin current.

The technique for simple fissure follows: The patient may be placed in either the right or left lateral Sims or the lithotomy position. The peri-anal skin is cleansed with alcohol and painted with tincture of iodine. The ampoules of anucaine are warmed and ten cc aspirated through a cannula or large needle into a dry ten cc Luer-Lok syringe, the cannula or large needle then being replaced by an eighteen or



twenty gauge two and one half inch Luer-Lok needle. A wheal with one per cent aqueous novocaine is first raised one to one and one half inches behind the anal verge in the midline and through this the eighteen or twenty gauge needle is inserted and directed laterally into peri-anal tissues at a depth of one to one and one half inches so that the branches of the inferior hemorrhoidal, fifth sacral and pudendal nerves are reached as they traverse the ischio-rectal fossa. About four cc of anucaine are injected on one side and the needle retracted without being withdrawn and the opposite side injected in a similar manner. The finger is then inserted into the anus with the flexor surface toward the fissure and two cc of anucaine injected immediately beneath the fissure bed. All these injections should be made through a single novocained puncture wound of the needle through which the anucaine is introduced.

An even flow of anucaine should be maintained as the needle is advanced into the tissues to minimize pain of injection and to distribute the solution in a fan like manner and avoid pooling. Injection of anucaine into the skin, into the mucosa or pooling may result in slough.

Sufficient anaesthesia may be secured by topical application of ten per cent aqueous cocaine for five minutes, or by underlying the fissure with one per cent aqueous novocaine to permit insertion of the finger before anucaine injection is started. The flexor surface of the cot-covered, lubricated finger hooked over the anal ring protects against perforation of the bowel wall by warning of the approaching needle. If this is done the inserted finger must be kept still during the entire injection and contamination of the peri-anal skin must be guarded against.

Anucaine may be injected directly into the sphincter muscle and this is recommended by Morgan who believes failures are due to too superficial injection of the oil anaesthetic.

A transient burning is sometimes complained of during injection of anucaine but this soon passes and is followed by relaxation and full anaesthesia a few minutes after the injection is completed. Following the injection of anucaine the sphincters are readily dilated and the fissure exposed in its entire extent. Dilation, not divulsion, is important for sphincter rest is necessary for healing, circulation and drainage. The entire fissure bed is now sparked with Oudin current, and this current only and sufficiently so to destroy the fissure bed.

This technique relieves the pain at once, removes the offending ulcer bed and promotes rapid healing. The slough following the proper use of the Oudin current is slight and the resultant scar elastic and satisfactory. Post-operative measures are simply to keep the wound as clean as possible. Anaesthesia

with relaxed sphincters is afforded by anucaine for as long as ten days to three weeks promoting good drainage and a comfortable convalescence. A bipolar technique should not be used here since three essentially different tissues, muscle, mucosa, and connective tissue are treated by the same current intensity and each reacts differently. A deep, inelastic troublesome scar might be the result.

**Complicated or Chronic Fissure:**—In this type of fissure the break in the muco-derm of the anal canal has become indurated due to fibrosis which usually extends to the sphincter muscles and by hypertrophic changes in the peri-anal skin resulting from repeated trauma, infection and inadequate drainage. The fibrosis found in the anal canal is usually posterior but may involve the entire anal circumference and be extensive enough to cause stricturing of the anal canal. The fibrosis is the so called pecten band or pectenosis, and it occurs in fissure so that normal dilation of the anal cannot occur and has an important bearing on ano-rectal pathology. The etiologic importance of chronic fissure in sinus formation, perianal infection and pruritis is not sufficiently appreciated. To successfully combat chronic fissure the importance of internal hemorrhoids, cryptitis, papillitis, proctitis, prostatism, pelvic tumors and rectocele which interfere with proper circulation and drainage of the anal canal must be recognized.

#### TREATMENT

It is generally agreed that the only uniformly successful treatment of chronic fissure is operative. The operator should recognize the clinical syndrome and be familiar with the detailed anatomy of the sphincter and the levator muscles as a radical excision of the chronic fissure with division of the subcutaneous and perhaps deeper portions of the external sphincter muscle, opening of the sinuses, removal of co-existing anal pathology and adequate drainage incision are necessary if these patients are to be benefited.

The patient is given the usual pre-operative catharsis and sedation. Anaesthetic may be caudal, local, spinal or general but anucaine should always be used for post-operative comfort and it injected as previously described under simple fissure. Caudal anaesthetic, often combined with sacral, is ideal for these cases. If local is used aqueous novocaine in sufficient amount to give good anaesthesia must be used in addition to anucaine. It is impossible to work satisfactorily on some patients under local anaesthesia. The procedure is not an ambulatory one and should only be performed in the hospital.

As it is in the chronic fissure that peri-anal supuration is apt to be found it should be pointed out that such infection constitutes a definite contraindications to the use of oil soluble anaesthesia.

(Continued on page 30)

## PRESIDENT'S PAGE

To the members of The Kansas Medical Society:

Are the members of The Kansas Medical Society fully aware of their position today?

Are you standing idly by with the spirit of letting George do the work?

Shall the Medical Practice Act in our state become a mere scrap of paper,—and the doors of our state be opened wide to become the mecca for cultists, and the public health of our state suffer thereby?

The apparent apathy of some of the membership is disappointing. The end results to be obtained will be in direct proportion to the interest and effort of the component societies and the membership thereof.

It is time for organized medicine to assert itself as a unit, "to withstand the onslaught of commercialism, government control, and cultist invasion."

May I appeal to each and every member to do their utmost!

The officers of your Society need your help, and among other things if you have not yet paid your assessment, please do so at once, and may it never be said that organized medicine in Kansas is so indifferent that the health and welfare of the people of Kansas suffer from the lowering of the standards of the healing art by an organized minority.

N. E. Melencamp, M. D., President.



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## EDITORIAL

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### Lay Press Comment

The recent action of the Department of Justice against the American Medical Association has provoked lay comment all the way from ill-informed and ill-intending magazine articles to editorials in some of the country's leading daily newspapers.

An editorial in the "Atlanta Constitution" has something good to say on the side of organized medicine, from which we quote in part:

"Where the matter is examined in the cold light of common sense, with all the political fog removed, the premise upon which the indictment is based is absurd. The American Medical Association is no more of a trust, or a combination in restraint of trade, than Mr. Arnold's American Bar Association, or the national organization of architects or indeed, the American Federation of Labor, all of which have prescribed rigid rules of practice. The profession of medicine, by its very nature, is a monopoly. It couldn't very well be otherwise. . . . It requires never ceasing vigilance to maintain these scientific and ethical standards. If they were altered to fit some particular social theory the profession would soon be overrun with all manner of smooth-tongued quacks. It is not denied there is room for broadening and improving the medical care of all the people. The doctors, as a whole, are aware of this. They are willing to co-operate. They are co-operating, on a broad front, and in a practical way. The nature of the extensions sought, however, are such as should call for making haste slowly. It must first be decided just what is to be done.

"Therefore the indictment under the assumption that a certain pet scheme in Washington to revolutionize medical practice is everything to be desired will, in all probability, do more to retard than to hasten the movement."

Here is understanding comment. There is an enormous amount of confused and hysterical think-

ing going on involving questions of medical economics and social planning and this confusion and resulting hysteria is due to many misleading magazine articles and other forms of propaganda which react against the interests of scientific medicine and the welfare of society.

In a period of accelerated social change such as that through which we are now passing sober thought and the scientific approach must ultimately govern a program of action, whereby organized medicine in co-operation with government agencies will devise plans for the extension of medical service to all the people.—R. B. S.

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### The Treatment of Angina Pectoris

Since Heberden's classic description of angina pectoris, little has been added to the clinical diagnosis of the syndrome. Little has been determined about the causes and nature of heart pain although it is generally believed to be related to myocardial ischemia or anoxemia with a resultant accumulation of abnormal metabolic products which produce pain. Mechanical factors may also be involved.

The most effective therapeutic measures have been restriction of activity, the use of vasodilating drugs of the nitrite group reduction of weight, and limitation of the use of tobacco by the patient. In recent years the drugs of the xanthine group have gained considerable favor but clinical experience and animal experimentation suggests that their effect on increasing coronary blood flow is only momentary and then only, when given intravenously. Surgical methods of establishing collateral myocardial circulation and interruption of the nerve pathways of pain propagation have not yet become popular.

A new simple method of treatment was presented by Kerr\* in the presidential address before the 1938 meeting of the American Heart Association. Since the majority of patients with the characteristic anginal syndrome are of the corpulent, apoplectic type in middle or late middle life and showed evidence of poor diaphragmatic excursion, a strong but slightly elastic abdominal support was applied. His original purpose was to improve respiratory function but he

\*Kerr, Wm. J. The Treatment of Angina Pectoris By Methods which Appear to Promote More Adequate Filling of the Heart. American Heart Journal 16: 544, 1938.

found unexpectedly that many of these patients were immediately relieved of their anginal pain. In four years approximately one hundred patients have been treated by this method with "uniformly excellent" results. They no longer needed vasodilator drugs and could undertake considerable more activity without pain or its equivalents.

Dr. Kerr believes that restored function of the diaphragm in aiding the return of venous blood to the heart by the normal alternating changes in intrapleural and intraabdominal pressures is responsible for the improvement. He admits that further study is necessary to explain the phenomenon. Dietary reduction of weight is utilized at the same time, but relief was obtained as soon as the abdominal counterweight was supported. This apparently simple procedure may be the means of preventing or postponing many disastrous attacks of coronary thrombosis. D. C. W.

### Publicizing Socialized Medicine

When the original Committee on the Costs of Medical Care began its five-year survey of the distribution of medical care, the press was kept informed of every step, almost week by week, through releases furnished by the Millbank Foundation, which primarily and mainly was supporting the survey. When the report of the Committee was made, the papers were full of it. We did not say much, and did less. All of the publicity, and the more than a million dollars spent in the survey meant little to the people. Consequently, the movement of socialized medicine, based on the report of the Committee, fell flat. However, there was plenty of money where the original funds came from, and releases continued to flood newspaper offices—not to mention medical journal offices. Since that time at least three national surveys of the distribution of medical service have been undertaken, two of which have been completed. Not so much money was available for propaganda with regard to these surveys, hence the public read very little about them. Even so, the proposal that the medical profession be regimented and the practice of medicine socialized has been kept constantly before the people by well prepared and well presented argument sent out as releases to every sort of publication in this country.

So, when the showdown came this year, there was apparently very fine breeding ground in the minds of the people for the growth of this sort of weed.

Having decided to resist the effort to socialize medicine, the medical profession finds it necessary now to enlighten a people who think they are already well informed on the subject. It is constantly the experience of those of us who talk to the people on the subject of socialized medicine, that the people have either not been informed at all, or they have been sadly misinformed. Under the circumstances, it is no wonder that they are to a large extent lining up against us. They are of humanitarian make-up, most of them, and want to do good. That is the attitude of the doctor. People do good in the way they know to do it. If their knowledge of ways and means is faulty, the good they do will not be altogether good. How to get the true facts in the case over to the people who must do something about the situation is the big problem confronting the medical profession right now. That problem having been solved in the right way, it will be easy to induce Congress to legislate around socialized medicine, and not adopt it—either that, or bridge it over. Congress will doubtless be responsive to popular demand in this particular matter. We have reason to believe that most Congressmen do not believe in socialized medicine, but many of them will vote for it if it becomes a part of the so-called New Deal.

Various expedients are being adopted in various sections of the country to get over to the people what it is all about. Whole editions of newspapers have been filled with articles on the subject, at the instance of medical societies. Quite a large number of newspapers have of their own accord tried to persuade our people editorially that socialized medicine would be a mistake, and tell them why. Perhaps these have not been so numerous as those lay press editorials which have endorsed the idea, but they have helped a lot. Public meetings for the discussion of the problem have been held in many sections of the country, which meetings have been addressed by physicians who know about such things, and who are able to tell the story. We have noticed informative articles in magazines and publications of a variety, not at all connected with the affairs of medicine, espousing our cause. We wonder whether we are not trying to close the gate after the horse



has been stolen. Perhaps so, but perhaps there are other horses in the barn. At any rate, we in Texas must do something about it.

The Board of Councilors has undertaken to promote a series of public meetings over the State, at least one in each councilor district, at which meetings competent speakers are to discuss the various phases of the problem of socialized medicine. Some of these meetings have taken the form of dinners, while others have been simple assemblies. Some of them have apparently been very successful, while others have not been so impressive. The first of these meetings was held at Houston. It was a dinner, and there were more laymen present than physicians, all of them selected and invited. A large percentage of the medical profession of the Twelfth District assembled at a dinner at Waco, and here as in Houston, a large number of intelligent laymen were present. A large proportion of the profession of the Thirteenth District gathered at Wichita Falls, at a dinner, with a fine representation of laymen. At each of these gatherings there were two or three speakers who coordinated their addresses so as to cover the ground. Apparently this procedure is getting results.

Physicians who are known to be informed on the subject under consideration, are receiving numerous invitations to address various assemblies, particularly luncheon clubs over the state.

The object of this reference is to impress upon our readers the need of getting our view of socialized medicine before the public in at least a reasonably favorable light. It is not a difficult matter to organize and put over the sort of programs we have mentioned above.—Texas State Journal of Medicine, November, 1938.

### The Prison Reform Bill

Improved medical facilities for prisons is stressed in the prison reform program now before the legislature.

A penal system defeats its ends if it does not function well in the rehabilitation of its inmates insofar as is possible. The support of the medical profession of Kansas should be given toward securing the proper treatment of tuberculosis, venereal disease and the psychiatric aspects of prisoners.

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## EYE, EAR, NOSE & THROAT

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### INFECTIVE GRANULOMATOUS CONJUNCTIVITIS

H. L. Kirkpatrick, M.D.

Topeka, Kansas

In 1889 Parinaud described an infective conjunctivitis of animal origin usually of uni-ocular incidence. Clinically it resembled a granular conjunctivitis, the granulation being sometimes red, sometimes yellow, at first semi-transparent and later opaque, while the lids were swollen firm and nodular; actual ulceration occurred. Parinaud described three cases in which the bulbar conjunctiva were involved as well as the lid. He made the observation that the cornea was always clear but he reported only three cases. Very early in the disease the parotid region became the site of inflammatory swelling which extended to the neck, in the midst of which swollen and softened glands were discovered. The condition was accompanied by a moderate and irregular fever. The parotid swelling diminished after five weeks but the glandular enlargement progressed to sluggish suppuration.

Parinaud reported no pathological findings and defined no bacteriology, thus leaving the door open for the very considerable confusion which has followed. For a long time bacteriological and animal inoculation were all negative. Suggestions and theories have ranged from tuberculosis to allergy.

In as much as he considered Parinaud's assertion that the animal origin of the disease was not proven, Gifford proposed the term Parinaud's Conjunctivitis, and since that time this name has been generally accepted. The result has been that every case of obscure chronic conjunctivitis with vegetations and ulcers and associated with regional lymphadenitis has been classed Parinaud's disease with little or no attempt to run the etiological factor to earth. In recent years, more etiological factors have been discovered in different cases and it is now quite obvious that the term has been used indiscriminately to describe many clinical entities. Parinaud's conjunctivitis is therefore not a definite disease with specific pathology and bacteriology but a syndrome of symptoms.

Several conditions may thus be classed as being included in Parinaud's oculo-glandular syndrome. For example: (a) Filterable virus derived from animals may be responsible for some cases.

(b) Tuberculous conjunctivitis.

- (c) Syphilitic conjunctivitis.
- (d) Necrotic infection conjunctivitis.
- (e) Tularensis conjunctivitis.
- (f) Leptothrix conjunctivitis.

Each case presenting the clinical picture of a unilateral conjunctivitis with lymphadenopathy should be subjected to the following tests:

- (1) Smears and culture for leptothrix.
- (2) Tularemia.
- (3) Partial excision and examination for leptothrix or tubercles.
- (4) Blood Wassermann.

### CASE REPORT

This patient, an employee of a local packing plant, was first seen January 7. He gave a history of plaster falling in his right eye. The eye was inflamed. No plaster was found. The conjunctiva was only moderately injected. When seen the next day there was considerable improvement and he was sent back to work. Three days later he was brought in and the eye was about as it was at the first examination. From then on, the progress was rapidly worse. On January 15 the lid was markedly swollen with considerable chemosis of the ocular conjunctiva. There were two small nodules in the conjunctiva of the lower lid, yellowish white and about 2 mm in diameter. Along the fornix of the upper lid there was a granulomatous mass about the size of a pea. The next day it was impossible to turn the upper lid because of the marked edema which was board-like. There was corneal ulceration. There was a large amount of purulent exudate in the conjunctival sac. The pre-auricular gland which was about the size of a hazel-nut up to now, was the size of a walnut.

He was placed in the hospital, irrigated with boric solution every hour, hot packs applied on the eye and glands almost continuously. Anything within reason that was suggested by informed consultants was used.

While the glandular involvement was going on the conjunctival reaction kept pace, numerous nodules developed, broke down and were opened. A few ulcerated through the skin. The corneal ulcer spread over three-fourths of the cornea but never was deep. The bulbar conjunctiva was as chemotic as is seen in a severe case of gonorrheal conjunctivitis.

Because nothing used seemed to help in the least, x-ray exposures were ordered. After the first treatment there was immediate improvement. The granulations on the conjunctiva began to subside and the general edema of lids and face improved. When discharged he had a ninety-eight per cent loss of vision in the eye.

Bacteriological examinations were carried out from the onset. The only organism found early was an

xerosis-bacillus and a few pneumococci. Negative findings for gonococcus and leptothrix. Cultures were made from all incised abscesses. Examinations for the fungi and mycotic organisms were negative.

Finally a small bacillus was isolated which produced similar abscesses in rabbits. It is a more or less rare actino-bacillus. This organism was verified by the Bacteriology Department of the University of Kansas after about three months work. I have been unable to find a report of this organism as the active agent in any ocular disorder, though it has been found in several pulmonary infections.

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## TUBERCULOSIS CONTROL

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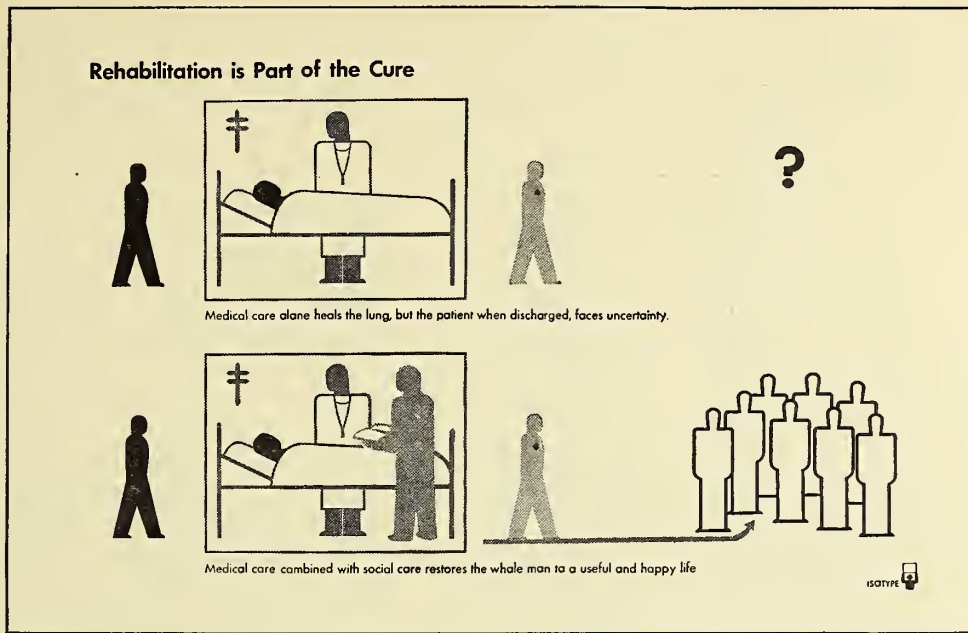
The following extracts from an article by H. D. Hicker, Chief of the Bureau of Vocational Rehabilitation of California, appeared in the January 1939 issue of a pamphlet, Tuberculosis Abstracts, issued monthly by the National Tuberculosis Association:

### COUNSELING THE TUBERCULOSIS PATIENT

Not only medical skill is necessary to restore the tuberculosis patient to a useful life, but also the aid of mental hygiene, social welfare, education, training and placement services. Each patient must be treated as an individual, yet one must remember that the individual is not an assembly of parts and functions and that, therefore, he must be treated as a whole. Consequently all workers in the tuberculosis field must coordinate their services. Vocational rehabilitation is closely linked with medical and social services.

Under the Federal Rehabilitation Act of 1920 and the subsequent state rehabilitation acts, tens of thousands of men and women with physical disabilities of various types have achieved satisfactory vocational adjustment. It has been amply demonstrated that the rehabilitation program of vocational counseling, training and other related services can and does make physically impaired persons employable. Yet comparatively few tuberculosis patients have received the benefits of the Rehabilitation Service. Among the reasons given for this lack are that the Rehabilitation Service has shared the widespread fear of this disease and the belief that very few cases recover sufficiently to become employable. Another reason is that tuberculosis patients represent only a small fraction of the large number of handicapped persons and that resources are limited. The remedy for this lies in broadening





the scope of rehabilitation service through legislation.

#### RESULTS OF COUNSELING

The California Bureau of Vocational Rehabilitation has at this time a live roll of 659 tuberculosis patients and ex-patients. Each year since 1933 has seen an increase in the number enrolled. During this time 758 persons (thirty-one per cent) out of a total of 2,418 in training have been rehabilitated, which means, placed in a suitable job with a fair salary, and each year the proportion of those rehabilitated has increased.

How permanent is the rehabilitation of ex-patients? Of 209 individuals rehabilitated in Los Angeles County during the period of 1928 to 1936, 155 (seventy-four per cent) are still employed; whereas in a control group of ninety-eight individuals discharged from sanatoria who had not received training, the number still employed is thirty-four (thirty-four per cent). Not so favorable was the discovery that about twenty per cent of the rehabilitated individuals have had relapses of their disease and eight (four per cent) died, though the work was not the cause of death.

Vocational training is seldom a part of the sanatorium program. We believe that selected reading activities, adult education, and occupational therapy fit better into the sanatorium situation, with as much prevocational emphasis as may be desirable in individual cases. Nevertheless, training is occasionally provided for selected patients whose condition is at least quiescent and improving to indicate discharge within a reasonable time, and assuming that training facilities are or can be made available.

Approximately eight per cent of our tuberculosis cases start their training before discharge, either in one of the five sanatorium commercial classes conducted by the Bureau, or by means of correspondence courses, or through employment training in sanatorium jobs. The advantages of this early start are improved morale, service as a hardening process, shortening of period of continued training after discharge and often either immediate or at least quicker placement. Training is always in accordance with medical advice, starting with a few minutes daily and increasing as the patient's condition permits.

Training is usually provided after discharge and after a period of adjustment to home conditions. The start is on a part-time basis, increasing to full time as condition warrants, and provision is always made for medical follow-up. Each training program is made to fit the particular needs, interests, and convenience of the individual trainee to the greatest extent possible; never do we try to fit the trainee into a cut-and-dried uniform program. Under these conditions we find that training may be successfully followed which results in successful rehabilitations.

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## CANCER CONTROL

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Editor's Note: The Journal regrets that the name of Dr. Newman C. Nash, Wichita, was omitted from the heading of the paper "Carcinoma of the Vulva, Vagina and Cervix" which appeared under the Cancer Section, page 521 in the December issue of the Journal. Dr. Nash was co-author of this article.

## TUMORS OF THE EYE AND ORBIT

by

W. G. Gilllett, M.D. and G. F. Gsell, M.D.  
Wichita, Kansas

Conjunctiva and Epibulbar Tumors	Pathology	Occurrence	Age	Symptoms	Diagnosis	Treatment	Prognosis
Adenoma	Occurs in any gland and tends to cystic formation	Rare	All ages	None, to slight irritation	Soft, pink, sessile or pedunculated tumor	Simple excision	Good
Papillomata	Occurs in conjunctiva at the limbus. Epithelial structure freely movable	Uncommon	All ages	None, to slight irritation	Pedunculated irregular mulberry-like growth	Simple excision but should be watched	Good
Epithelioma	Firm elevated epithelial growth at lid edges or limbus	Rather common	After 45	Not painful	Firmly fixed. Small grey growth becoming vascular and may be pigmented	Early removal followed by x-ray or radium. If eye is involved enucleation	Good with early diagnosis, bad with late
Granuloma and Plasmoma	Granulation tissue, connective tissue, leucocytes, plasma cells and giant cells	Common	All ages	Irritation and mild conjunctivitis	History of trauma, operation or inflammation	Removal with cautery	Good
Fibroma	Fibrous tissue	Uncommon	All ages	Slight irritation	Smooth pedunculated tumor on conjunctiva of lids	Simple excision	Good
Sarcoma	Round or spindle celled usually pigmented and vascular	Uncommon	Over 45	None until tumor is large, may be bleeding	Rapidly growing tumor usually at the limbus but can be anywhere in the conjunctiva	Complete local excision followed by x-ray or radium, removal of globe or exenteration of orbit	Bad, 80% loss
Haemangioma	Blood vessel tumor, vessels occasionally cavernous	Not uncommon	Congenital or in the young	None	Bluish vascular tumor, movable and can be emptied by pressure	Excision and x-ray electrolysis	Good
Lymphangioma	Dilated lymphatic vessels single or in a mass	Not common	Young	None	Clear cystic-like tumors	Excision if necessary	Good
Intra-Ocular Tumors							
Melanoma of Iris	Usually a pigmented growth composed of spindle or round cells. Rare cases not pigmented may originate in a nevus	Rare, more common in females	Seen in young but usual age 35 to 55	1st stage: presence of growth and irregular pupil. 2nd stage: acute glaucoma and pain. 3rd stage: Perforation of ball	If necessary iridectomy followed by pathological examination of the growth	Broad iridectomy if growth is small, all in iris otherwise removal of eye	Bad
Melanoma of Choroid	Pigmented growth composed of spindle and round cells	Not uncommon	45 to 65	1st stage: loss of vision, field changes. 2nd stage: Glaucoma. 3rd stage: perforation with proptosis and orbital growth	Detachment of retina, pupil dark by transillumination, pain in 2nd stage and shallow anterior chamber	Removal of ball. Exenteration if eye has been perforated by growth	Bad
Carcinomata	Usually metastatic from the breast	More often in women and very rare	45 to 55	As above, depending on its location	As above, with history of primary growth	Removal of eye or exenteration of orbit	Bad
Neuro-epithelioma or Glioma	Congenital and comes from granular layers of retina, cell structures resembles these cells	Rare, both eyes involved in 25% of cases	Infancy to 3 years, cases have been reported to 15 yrs.	Blindness and pain	Whitish yellow mass in fundus, cats eye reflex	Removal of eye	Bad
Orbital Tumors							
Sarcoma	Sarcoma tissue qualified as myxo-, melano-, glio-, osteo-, Chondo-, round cells, etc.	Common	More in young people	Proptosis, diplopia, poor vision displacement	Increasing symptoms x-ray may help	X-ray, radium and radical surgery	Poor, frequently metastasize
Carcinoma	May extend from sinuses or lids	Primary rare metastatic more common	More in older people	As above	As above	As above	Poor
Metastatic Tumors	Osteogenic sarcomas adenocarcinomas, hypernephromas	Common	Any age	As above, depends on position in orbit	As above, Primary gives clue	As above	Poor



## MEDICAL ECONOMICS

### PUBLIC EDUCATION PLAN IN SALINE COUNTY

Maurice Snyder, M.D.

Salina, Kansas

The medical profession has recognized for some time that scientific progress in medicine was far in advance of its social utilization. This has without question been due largely to gross indifference on the part of the public to matters pertaining to health. The profession has also been partly at fault, mostly because of a reluctance on their own part to sell or disseminate this newer knowledge to the public. As a result of this indifference, the race is likely to suffer irreparable losses and the cost of medical care will continue to mount, before this knowledge is put into practice.

Today when we stand confronted on all sides with menacing forces which threaten to destroy the private practice of medicine with its present high standards, it behooves every unit of the medical organization to change its laissez-faire attitude of public relationship and do something different.

In order to strengthen the public esteem for the medical doctor, confound the claims of the cults, and increase the goodwill of the newspapers towards the medical profession, the Saline County Medical Society decided it was imperative to conduct a program of educational publicity in the local newspapers.

A public education committee, consisting of two members of the local society was appointed to organize the plan and to write the articles, which were to appear by-weekly in the Salina Journal, a daily newspaper published in Salina, which has a wide circulation over central and northwest Kansas. Each of the forty members of the society were assessed twelve dollars a year which enabled us to carry a six by ten inch double column, easily readable advertisement.

On February 1937 "A Statement from the Medical Doctors" in large type headed the society's first paid advertisement in the local newspaper which by way of introduction, read as follows: "The Saline County Medical Society whose membership is limited to ethical doctors in Saline and adjoining counties, will publish in the Salina Journal a series of educational statements that have been prepared for the purpose of explaining to the general public the importance of competent medical attention, the medical doctors essential place in the normal scheme of life, and the

Numerous other tumors may occur rarely or uncommonly within the orbits. Some of these are myxomas, cylindromas, adamantinomas, neuromas, rhabdomyomas, plasmomas, psammomas, lipomas, etc. A tumor may be suspected when the symptoms of exophthalmus, diplopia, displacement of the eyeball, or interference with vision are encountered.

Orbital Tumors	Pathology	Occurrence	Age	Symptoms	Diagnosis	Treatment	Prognosis
Lachrymal Gland	Usually adenocarcinoma or mixed tumor	Uncommon	Early life	Swelling at outer orbital edge	Palpation and x-ray	Surgically accessible x-ray and radium	Fairly good
Orbital ridge Tumors	Meningioma	Not uncommon	Any age	Proptosis, poor vision, field defects diplopia, cranial symptoms	Atrophy of optic nerve, 3rd nerve paralysis	Extensive neuro-surgical	Poor
Dermoid Cysts	Cystic-hairs, sebaceous material near orbital suture lines	True cysts uncommon	Congenital in early life	Push out lids, not globe	Palpation	Surgical	Cured, if entirely removed
Sebaceous Cyst	Sebaceous material, prelacrymal region	Rare	Any age	As above	As above	Surgical	Above
Angiomas	Net-work of lymph or blood vessels	Common	Early in life	Proptosis reducing on pressure occasionally pulsating	Fluctuates occasionally bluish in color	X-ray and radium good	Good
Endothelioma or Meningioma	Fibroblastic tumor tissue in whorls about blood vessels endothelial cells	Common	Adult	Slowly developing exophthalmus few symptoms	Most common upper and inner quadrants of orbit	Surgical, hard to remove all, x-ray resistant	Poor
Glial and Neural Tumors	Depends on type of neural cells	Uncommon	Usually children	Slowly increasing proptosis rapid increase	Rapid growth	X-ray and radium	Poor metastasize
Fibroma	White connective tissue	Uncommon	Usually 3rd-4th decade	Exophthalmus diplopia	Palpation x-ray	Surgical, occasionally responds to x-ray	No recurrence
Osteoma	True bone, usually from orbital bones nasal side	Uncommon	Any age	Above	As above	Surgical	Above
Neurofibromas	From connective tissue cells of nerve sheaths	Uncommon	Children and young adults	Occasional sagging of upper lid diplopia common, poor vision	Palpation	Surgical	Many become sarcomatous



### Much Public Interest in Glands of Internal Secretion

GLANDULAR PRODUCTS SHOULD BE USED  
ONLY UPON ADVICE OF YOUR  
MEDICAL DOCTOR

Medical Science is advancing rapidly and general interest among non-medical minds is being aroused. There are several of these glands and all are important; they must be discussed separately if anything is to be gained.

There should be an intense interest in this field of medicine; but to rush headlong into glandular treatment is only asking for trouble. Brilliant work has been done along this line by Medical Doctors and more is sure to fol-

low. Time and care in the diagnosis are necessary if the best interest of patient and doctor is to be considered.

The health of every individual depends upon the proper correlation of the work these glands are intended to do. The knowledge of the thyroid gland has brought health to many, both young and old. The challenge to Medical Science in the working of these glands is enormous. It is being met; and the public health will be greatly benefited by this work.

### The following Medical Doctors are members of THE SALINE COUNTY MEDICAL SOCIETY

D. A. ANDERSON, M. D.  
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C. D. VERMILLION, M. D., Tecumseh



### How Can We Protect Our Children Against INFANTILE PARALYSIS?

Nothing would please Medical Doctors more than being able to answer this question.

Probably no disease, with the possible exception of cancer, has been given as thorough study as has Infantile Paralysis.

Various agencies have been given as the cause of this disease. But up to date none of these have been definitely proven. Also many methods of treatment have been used and some of these were supposed to have specific merit. This also has not been proven. Today we feel that serums of unknown value should not be used.

Only a year ago many believed that Infantile Paralysis could be prevented by the use of a Zinc Sulphate solution used on the mucus membrane of the nose. Controlled

experiment with thousands of children in Toronto, has proven this to be untrue.

Infantile Paralysis usually appears late in August and few new cases appear after the first hard freeze. There will probably be no epidemic this year.

The fear of the disease is worse than the disease for the community, taken as a whole. This fear is worse because we do not know how to protect against the disease. Public sanity should be the order if and when it appears.

Medical Doctors thoroughly equipped, are working constantly to find the cause and treatment. Until this is accomplished, a sane viewpoint will go a long way in relieving the worry of those about us.

"Your Medical Doctor and You" Series

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## APPENDICITIS

### Our Most Treacherous Disease

The death rate from appendicitis is still needlessly high in spite of our greater knowledge of the disease, increased hospital facilities and improved surgical technique. The majority of deaths resulting from appendicitis are due to delay in seeking medical advice.

In certain cities, notably Philadelphia, the mortality rate in acute appendicitis has been greatly reduced. This has been brought about by the dissemination of public information on the dangers of delay in seeking early medical attention and the danger of using laxatives in the presence of abdominal pain.

The Medical Doctor of today is fully cognizant of the importance of early diagnosis in acute appendicitis and of the virtual riskless operation in uncomplicated cases. Self treatment is dangerous as it means delay, complications, and perhaps death.

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### Can My Child Be Protected Against Whooping Cough, Diphtheria and Smallpox?

The answer to all of these is,—yes, your child or any other child can and should be protected against these diseases."

Whooping Cough takes thousands of little lives each year. It is especially dangerous for the child the first three years of life. To Louis W. Sauer, M. D., goes the credit for the successful fight to banish this disease. The vaccination is absolutely safe and the cost of prevention is not large. Every infant should be protected by this vaccination before the end of the first year.

Most mothers know that they can protect their children against Diphtheria. This is best done at the end of the first year. Every child who receives this protection should later be tested to make certain that the protection is absolute. The Medical Doctors of Kansas want to entirely eliminate this disease from our state. It can be done. Today, the presence of Diphtheria means neglect on the part of the parents or the doctor.

The vaccination against Small-pox should not be neglected. It gives perfect protection and cannot harm the child.

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# You Haven't Seen Us Here Before!

This is John Wyeth & Brother's first ad in your State Journal, and we're glad to be here to wish you a Happy and Prosperous New Year—Also to tell you about

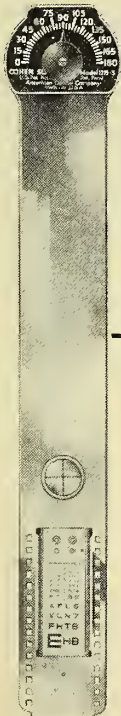
## SILVER PICRATE *Wyeth*

**An effective Council Accepted Treatment for TRICHOMONAS VAGINALIS VAGINITIS**

**A**N effective treatment by Dry Powder Insufflation to be supplemented by a home treatment (Suppositories) to provide continuous action between office visits. Two Insufflations, a week apart, with 12 suppositories satisfactorily clear up the large majority of cases.

**SILVER PICRATE**—a crystalline compound of silver in definite chemical combination with Picric Acid. Dosage Forms: Compound Silver Picrate Powder—Silver Picrate Vaginal Suppositories. *Send for literature today.*

JOHN WYETH & BROTHER, INC. • PHILADELPHIA, PA. • WALKERVILLE, ONTARIO • LONDON, ENGLAND



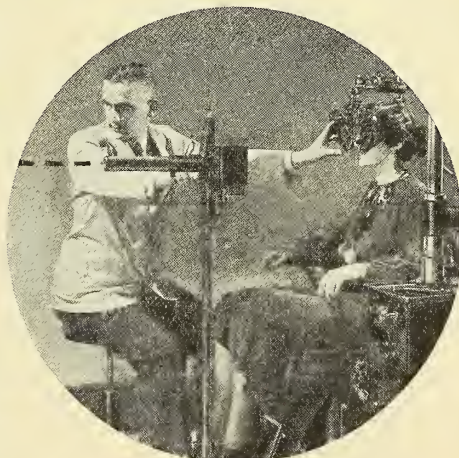
## ROBINSON-COHEN *Slide*

**Simplifies - Speeds up the Subjective Test**

The Robinson-Cohen slide has this great advantage. The entire procedure can be performed without recourse to test letters. The letters at the completion of the test serve only to verify the findings.

In the Robinson-Cohen, the astigmatic

test is performed against a monochromatic red background—the test for spherical correction is based upon the achromatic differentiation of the human eyes by the use of concentric circles in red or green fields respectively. This test discourages disturbing accommodative spasms — suggests an objective procedure — by avoiding any false impressions that the patient, himself, is selecting his own prescription. This test yields excellent results with children, illiterates and in most cycloplegic refraction of latent hyperopia cases. It is designed for use with the AO Project-O-Chart.



*Last number of each line is an indication of the equivalent visual acuity. For example—Line ZNB/574—when patient identifies 4, refractionist knows 20/40 line has been read.*

**AMERICAN OPTICAL COMPANY**

contributions medical science has made to advancing civilization."

Every two weeks, thereafter, an advertisement was run. It carried at the top of the ad, the combined emblem of the American Medical Association and the Saline County Medical Society, and was headlined by pertinent bold face titles, followed with short, to the point stories about medical history and progress, medical contributions, advice concerning the value of preventive medicine and the importance of the periodic physical examination, the background and service of the local ethical hospitals, and description of the value and functions of organized medicine. The "Medical Doctor" was purposely stressed, was always referred to in this way, and was made to appear frequently throughout the advertisements.

The balance of the space, at the bottom of each ad, was devoted to a dignified listing of the members of the county society, consisting of their name and followed by the usual M. D. suffix.

Typical of the headlines and titles used in these advertisements were the following: "Is your Doctor an M. D.?" "Go to your Doctor in advance of trouble"; "Appendicitis—our most treacherous disease"; "Today Medical Science can keep you well"; "Heart disease—the number one cause of death"; "Shall my boy be a Medical Doctor?"

The Committee on Public Education of the local society prepared the entire series of articles itself. The material is original, and an attempt was made to have the articles appear timely in relation to seasonal trends and variations of prevalent diseases. The advertisements were given a prominent position in the newspaper, and the contents were assembled in such a manner that they did not appear like an ordinary commercial advertisement.

Since this type of advertising in no way violates the code of ethics of the American Medical Association, their appearance should be entirely unobjectionable from the ethical standpoint and cause no embarrassment from members of the profession in adjoining counties.

Nor were they criticized as far as we know by the cultist groups, of which this community has many, so no statements of a derogatory nature were made or aimed directly at them. We felt that rather than "throw stones" we would appear more deserving in the eyes of the public if we left the cults out of it and proceeded in a more subtle way by stressing the great achievements, the high standards and honorable history of the medical profession.

How much good we have done through the newspaper plan of public education is difficult to determine at the present time. We have run these ads, in the fashion described, for the last two years. They have received much favorable comment from the

allied professions, such as the dentists and the druggists. We know the public reads them, and we feel confident that they are doing some good.

Educating the public along medical lines, through any medium of publicity, comes only after much persistent and repeated efforts. Commercial advertisers have long realized that getting a product before the public necessitates continuous advertising, even after the product has become adopted. Public medical education is certainly no exception and to be effective must be carried on at frequent intervals and probably permanently.

We are convinced that educational advertisements such as we have planned can do nothing but bring some favorable results. Articles on health, when sponsored by the regular profession, would tend to make people more health conscious. In order to be effective they should attempt to sell the public on the idea of disease prevention and point out the effectiveness of treatment in cases which come early to the doctor before the disease process becomes irreversible. The vastness of the field of medical science should be called to their attention, and the role played by the modern medical man as a necessary factor in the continued progress of this ever changing science stressed. The public should know more about the activities of organized medicine and how it concerns itself with public health problems, with raising the standards of the practice of medicine, its hospital regulation and how through its many councils there is maintained a watchful eye over the health of nation.

It is only through obtaining the continued support of the public that the present high standards of medicine can be maintained. This can be brought about in any number of different ways. It can be done in no better manner than by letting the laity in on a few medical secrets—i.e. medical education, and why not by way of the newspaper advertisement.

#### **Oil Soluble Anesthetics in the Treatment of Anal Fissure**

(Continued from Page 19)

Other contra-indications are systemic conditions as nephritis, diabetes, senility, anemia etc. which cause decrease in tissue resistance. The criticism of oil soluble anaesthetics would be less if only a superior preparation from ampoules is used and the simple rules of injection are rigidly followed. The oil should never be injected into the skin or mucous membrane as slough is very likely to result; the solution should be distributed in a fan like manner as pooling may cause severe local tissue reaction and be followed by sloughing. If induration follows injection the hardened area should not be incised as remission without



# RECENT ADVANCES IN THE SCIENCE OF NUTRITION

## V. Factors Affecting the Vitamin C Contents of Foods

● Recent development of the chemical method for estimation of ascorbic acid (1) has permitted more thorough study of factors determining the vitamin C contents of foods. Circumspectly used, the 2, 6 dichlorophenol-indophenol or "indicator" titration method for vitamin C determination has proven an invaluable tool in this phase of research.

It is now apparent that the vitamin C content of food at the time of consumption is conditioned, first, by the initial ascorbic acid content of the food at the time of harvesting, and second, by the treatment to which the food is subjected between the time of harvesting and the time of consumption.

The initial vitamin C level in raw foods has been found to depend on factors such as variety, maturity and growing conditions (2). Under usual conditions of food crop production, such factors are only partially subject to human control. However, the factors influencing vitamin C in foods from harvesting until consumption are capable of closer regulation by man.

For example, it is known that long storage at improper temperatures adversely affects the initial ascorbic acid contents of foods. Even at refrigeration temperatures raw foods may lose substantial amounts of vitamin C during storage. Rough handling—which causes rupture of vegetable tissue—is also conducive to vitamin C loss especially when followed by improper storage. Certain metals will catalyze vitamin C destruction and even commonly used home-

cooking methods are attended by losses of this essential dietary factor (2).

Briefly, preservation of vitamin C in foods between harvesting and consumption is essentially a problem of preventing or reducing oxidation, either enzymatic or atmospheric. In addition, physical or solution losses must be minimized in preparation of the food for the table. It is pertinent to note that modern commercial canning procedures are well adapted to control both these chemical and physical losses of vitamin C (3).

The use of prime raw stock and quick transport to the cannery after harvesting; rapid inactivation of enzymes through heat treatment; and large scale automatic operations with minimal exposure to air, are basic practices common to all modern canning procedures. All serve to check oxidative losses of the initial ascorbic acid present in raw foods. In addition, during canning, the foods are cooked by the heat process while contained in the sealed can. The liquid within the can, therefore, retains vitamin C which has been removed from the food by solution.

Researches have shown that many commercially canned foods are to be listed among the most valuable contributors of vitamin C to the diet of the American people (2, 3, 4). Such findings demonstrate the effectiveness of modern commercial canning procedures in preservation to the highest practical degree of the initial vitamin C contents of foods.

## AMERICAN CAN COMPANY

230 Park Avenue, New York, N. Y.

(1) 1932. Ztschr. f. Untersuch. d.

Lebensmitt. 63, 1.

1933. J. Biol. Chem. 103, 687.

(2) 1938. J. Amer. Med. Assn. 111, 1290.

(3) 1932. Ind. Eng. Chem. 24, 650.

(4) 1938. J. Amer. Med. Assn. 110, 650.

1937. Bull. 19-L Nat'l. Cannery Assn.,  
Washington, D. C., 4th Ed.

*We want to make this series valuable to you, so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles. This is the forty-fourth in a series, which summarize, for your convenience, the conclusions about canned foods reached by authorities in nutritional research.*



The Seal of Acceptance denotes that the statements in this advertisement are acceptable to the Council on Foods of the American Medical Association.

necrosis or drainage usually results if the area is treated conservatively.

The technique may be carried out with the cold knife or better with electro-surgery as follows: After complete dilation and exposure the fissure is excised with the cutting current, care being exercised not to encroach too much on the sphincter muscles. The incision is carried back into the post-anal skin the edges trimmed away producing a large triangular drainage wound at least two and one half or more inches on all sides. The deeper the cut through the sphincters the further back should be the posterior drainage would be carried. The degree of contraction of the anus at the original digital examination acts as a guide to the amount of division of the sphincters required. A safe rule is to completely divide the fibers of the subcutaneous external sphincter which is often erroneously regarded as the entire external sphincter. The reader is again referred to the detailed anatomy of the sphincter and levator muscles as described in a splendid contribution by Milligan and Morgan.

If, after division of the subcutaneous external sphincter, sufficient relaxation is not obtained, one should proceed cautiously into the deeper portions of the sphincter apparatus inserting the finger after each small cut until the desired result is secured. It may be necessary to completely divide the fibers of the superficial and deep layers of the external sphincter to give complete relief. The usual tendency is to make too superficial divisions. The fact that a complicating pectenosis may obscure the exact division between the sphincter bundle must be recognized. The pecten band must be divided.

### SUMMARY

The great value and the proper technique in the injection of anucaine, an oil soluble anesthetic, has been described in both the treatment of the acute and chronic fissure. Emphasis has been placed on the pathological criteria for the essential classification of fissure into the simple and chronic types. The importance of recognizing that surgery with the proper division of the anal sphincter muscles is frequently the only means to relieve and cure the chronic fissure patient is particularly brought to your attention.

### BIBLIOGRAPHY

- \*Calvin Chemical Co., N. Y., N. Y.  
 Gorsch, R. V.: Oil Soluble Anaesthetics in Proctology. Medical Record 139:35-38, January 1934.  
 Yoemans, F. O., Gorsch, R. V., Mathesheimer, J. H.: Benocol in the Treatment of Pruritis Ani. Tr. Am. Proc. Soc. 1927.  
 Gorsch, R. V.: Fissure-in-ano, its Pathogenesis and Treatment. The Medical World, Vol. 56, No. 5, pp. 300-302, May, 1938.  
 Milligan, E. T. C., Morgan, C. Naunton: The Lancet, 1934 pp. 1150 and 1213.  
 Morgan, C. N.: Oil Soluble Anaesthetics in Rectal Surgery, British Medical Journal, November 1935.

## NEWS NOTES

### PAMPHLET

The Society issued on December 23, a pamphlet entitled "Facts About Osteopathy".

The pamphlet, which was forwarded to all members, contains a discussion of the qualifications of osteopaths to practice medicine and surgery.

### GROUP HOSPITALIZATION

A sub-committee of the Society Committee on Medical Economics is now conferring with a sub-committee of the Kansas State Hospital Association about possibilities pertaining to group hospitalization plans in Kansas.

Both committees plan to make reports on this subject within the near future.

### SCHOOL PROGRAM

The Committee on Public Health and Education has recently made arrangements to confer with the Kansas State Board of Education, and the Kansas State Teachers Association about the possibility of the Society joining with those organizations in an effort to provide more complete and extensive health programs in Kansas schools.

### BLIND PROGRAM

Dr. C. J. Mullen, State Ophthalmologist, Kansas City, Kansas, issued the following report pertaining to the Kansas State Board of Social Welfare restoration of sight program:

No. of cases approved as eligible for treatment to date.....	401
No. of cases completed treatment .....	64
16 cases still eligible for Aid to the Blind	
48 cases no longer eligible for Aid to the Blind	
No. of cases under treatment .....	106
No. of cases eligible for treatment but have not accepted treatment .....	224

#### Statistics Concerning Completed Cases in November

Total cost of completed cases in November.....	\$2,544.70
Average cost of cases completed in November.....	110.64
Doctors fees.....	58.3%
Hospital fees .....	34.7%
Optical fees .....	0.4%
Drugs .....	0.6%
Total cost of all 64 cases .....	\$5,467.12
Average cost per case .....	85.42
Total no. of examinations .....	1564
Total no. of cases eligible for Aid to Blind.....	1243
Total no. of cases non-eligible for Aid to Blind....	316
Total no. of cases pending .....	5

The Kansas Social Welfare Journal, the official publication of the Kansas State Board of Social Welfare made the following comments about Dr. Mullen's report in its December issue:

"This means that these 48 individuals, hitherto dwelling in a world of deep shadows or of total blackness, will henceforth live in a world of light and color—restored to normal life and increased usefulness. It means that 48 persons will no longer be eligible for aid to the blind, and that they may eventually be returned to the status of self-supporting citizens. It is, in effect, a return from the valley of shadows.





Loss of time and worry are luxuries that no doctor can afford. He must conserve his time and energy, keep his mind free for emergencies. Yet there are many doctors who "can't spare the time" to provide for assured protection against the serious loss of time and money, and the lack of peace-of-mind, that only Insurance can eliminate!

How about your Insurance? Does it cover all the risks that face you every day of your life? Unless you are sure, make sure! Call in an EMPLOYERS MUTUALS man to go over your policies, make unbiased, constructive

suggestions, and consider your specific problems in the light of his wide knowledge of Workmen's Compensation, Public Liability, Automobile, Plate Glass, Residence Burglary and Fire Insurance!

For more than a quarter of a century, EMPLOYERS MUTUAL LIABILITY INSURANCE COMPANY has guarded the interest of its policyholders, given them complete protection, and saved them money. You know the Company and its record. Why don't you phone or write the nearest Branch Office for a representative to call—today?

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LIABILITY INSURANCE CO.

*Employers  
Mutuals*

EMPLOYERS MUTUAL  
FIRE INSURANCE CO.

*Automobile, Public Liability, Workmen's Compensation  
Plate Glass, Burglary, Fire and Tornado Insurance*

HOME OFFICE: WAUSAU, WISCONSIN

**WICHITA: 914 UNION NATIONAL BLDG.**

*Branch Offices and Resident Representatives throughout the Middle West  
Consult Your Local Telephone Directory*

"Of the number approved, however, only 177 have accepted the opportunity. Reasons given by most of the 224 persons who have not accepted, to date, are: (1) They feel they are too old to undergo the operation or treatment necessary, or to benefit materially from it; (2) some fear the treatment; and (3) others say they will accept the treatment at a more opportune time."

"Personal relationship between doctor and client is maintained at all times, under the program. Choice of doctors is optional with the patient, with one proviso: the doctor chosen must be one of the state approved ophthalmologists."

"Every examination made is thorough and complete, and in every case, the best instruments and scientific knowledge are utilized for detection and examination of ailments. 'The cooperation of ophthalmologists,' said Dr. Mullen, 'has been excellent.'"

"After the examination, the examining doctor discusses with the patient the advisability of treatment and its chances for success. The client is frankly warned, if his condition is complicated and liable not to yield to treatment. His choice or rejection is, in all cases, voluntary."

## CONTROL OF CANCER

Dr. F. P. Helm, Secretary of the Kansas State Board of Health, received the following letter from C. C. Little, Managing Director of the American Society for the Control of Cancer on December 5:

"Please convey to the Cancer Committee of the State Medical Society the congratulations and appreciation of the American Society for the Control of Cancer for the excellent piece of work done by that Committee during this year in cancer control. The professional meetings organized as a Post-Graduate course in cancer are of great importance. We hope that other States will follow your lead."

## DEATH NOTICES

Dr. Marvin Hall, 45 years of age, died at his home in Topeka on December 21. Dr. Hall was born at Conway, Kansas in 1893 and received his high school education in the McPherson High School. He attended the University of Kansas and the University of Louisville, and graduated from the Louisville School of Medicine in 1917. He was commissioned a first lieutenant in the medical corps during the World War. At the close of the war, Dr. Hall began his practice of medicine in Canton, Kansas, and later moved to Topeka where he continued his practice until the time of his death. He was a member of the Shawnee County Medical Society.

Dr. Ray G. Hill, 79 years of age, died at his home in Wamego on November 28. Dr. Hill was born in Scituate, Rhode Island, in 1859 and received his medical education at the Hahnemann Medical College in Chicago, graduating from there in 1889. He moved to Wamego and continued his practice there for nearly fifty years. He was an honorary member of the Pottawatomie County Medical Society.

Dr. Theophilus E. Hinshaw, 80 years of age, died at his home in Winfield on December 23. Dr. Hinshaw was born at Pleasant Hill, Missouri, in 1858. He attended the grade and high schools at Pleasant Hill and later received

his medical degree from the Washington University at St. Louis, Missouri, in 1882. He practiced medicine at Chapel Hill, Missouri, for a short time then moved to Winfield where he continued until the time of his death. He was an honorary member of the Cowley County Medical Society which honored his fiftieth year in medicine in 1932.

Dr. Robert C. Hutcheson, 80 years of age, died at his home in Elk Falls on January 1. He received his medical education at the Kansas City Medical College and graduated in 1885. He had practiced medicine in Kansas for over fifty years. He was an honorary member of the Elk County Medical Society.

Dr. John P. Kaster, 81 years of age, died in a Wichita hospital on December 13. He was a resident of Topeka. Dr. Kaster was born in Burlington, Iowa, in 1857, and received his degree of medicine from the Rush Medical College in Chicago. Dr. Kaster had been practicing medicine for fifty-four years and had served as head of the medical staff of the A. T. & S. F. Railroad Hospital for forty-one years. He was an honorary member of the Shawnee County Medical Society.

Dr. Maggie L. McCrea, 74 years of age, died at her home in Sterling on December 19. Dr. McCrea was born in Iowa in 1864 and attended the Northwestern University Woman's Medical College from which she was graduated in 1891. She had practiced in Sterling for more than thirty years. She was a member of the Rice County Medical Society.

Dr. Emery Trekell, 61 years of age, died at his home in Wellington on December 8. Dr. Trekell was born in Cass County, Missouri, in 1887. He attended the University of Kansas, Lawrence, and later graduated from Northwestern University Medical School in Chicago, in 1910. He began the practice of medicine at Milan, later moved to Liberal then settled in Wellington in 1933. He was Sumner County Health Officer. He was a member of the Sumner County Medical Society.

Dr. Alpha John Wedel, 56 years of age, died at his home in Hesston on December 25. Dr. Wedel was born in McPherson, Kansas in 1882. He received his medical education at the University Medical College of Kansas City and was graduated in 1910. He returned to his home town of McPherson and practiced there until 1913 when he moved to Hesston where he remained until the time of his death. He was a member of the Harvey County Medical Society.

Dr. Jonathan H. Winterbotham, 65 years of age, died at his home in Salina on November 27. He received his medical degree from the Rush Medical College in Chicago, in 1896. He was a member of the Saline County Medical Society.

## MEMBERS

Dr. L. R. King, of Junction City, has retired from the active practice of medicine. He had practiced in Junction City for almost 49 years.

Dr. Byron Shifflet, Topeka, has moved to Los Angeles, California, where he will continue his practice.

Dr. Clifford Van Pelt, formerly of Paola, has moved to Riley where he will open an office.

Dr. Arthur E. Hertzler, Halstead, and Dr. Karl A. Menninger, Topeka, will speak at a meeting of the International Post-Graduate Medical Assembly which is to be held in San Antonio, Texas from January 24 to 26.



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whenever these symptoms occur . . .**

- It produces a sleep closely resembling the normal from which the patient awakens generally calm and refreshed.
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- It is free from cumulative effect when dosage is properly regulated.
- No untoward organic or systemic effects have been reported during the 14 years in which it has been used.

**Ipral Calcium** (calcium ethylisopropylbarbiturate) is supplied in 2-gr. tablets and in powder form for use as a sedative and hypnotic, and in  $\frac{3}{4}$ -gr. tablets for use where it is desired to secure throughout the day a continued, mild, sedative effect.

**Ipral Sodium** (sodium ethylisopro-

pylbarbiturate) is supplied in 4-gr. tablets for preanesthetic medication.

**Elixir Ipral Sodium**—Useful where a change in the form of medication is desirable. One teaspoonful of the elixir represents 1 gr. of Ipral Sodium. Available in 16-fl. oz. bottles.

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## COUNTY SOCIETIES

The Allen County Medical Society met in Humboldt on December 20. The following officers were elected for 1939: Dr. L. F. Schmaus, Iola, president; Dr. A. R. Chambers, Iola, vice president; Dr. O. L. Cox, Iola, secretary; and Dr. F. L. B. Leavell, Iola, treasurer.

Members of the Barton County Medical Society met in Great Bend on December 30. Officers for the coming year were re-elected as follows: Dr. T. J. Brown, Hoisington, president; Dr. Don Kendall, Great Bend, vice president; Dr. L. R. McGill, Hoisington, secretary-treasurer and delegate to State Society Meeting.

Dr. W. T. Wilkening, Fort Scott, was re-elected president of the Bourbon County Medical Society at a meeting on December 19 in Fort Scott. Other officers who will serve: Dr. J. J. Cavanaugh, Fort Scott, vice president; Dr. L. E. Ketner, Fort Scott, secretary-treasurer; Dr. R. O. Crume, Fort Scott, State Meeting delegate.

Election of officers was held at the December 2 meeting of the Brown County Medical Society in Horton. Dr. G. M. Edmonds, Horton, was elected president; Dr. E. K. Lawrence, Hiawatha, vice president; Dr. S. B. Beecher, Everest, secretary; and Dr. R. T. Nichols, Hiawatha, State Meeting delegate.

The Butler-Greenwood County Medical Society met in El Dorado on December 9 for the annual election of officers. Dr. A. P. Gearhart, Wichita, guest speaker on the scientific program, presented a paper on "Fractures". Officers who will serve during 1939 are as follows: Dr. R. M. Brian, El Dorado, president; Dr. Floyd Dillenbeck, El Dorado, vice president; Dr. W. E. Janes, Eureka, secretary-treasurer.

Members of the Central Kansas Medical Society re-elected Dr. George Zerzan, Holyrood, president, Dr. B. Anderson, Victoria, vice president, and Dr. Alza McDermott, Ellis, secretary-treasurer, at a meeting in Hays on December 1. Dr. C. Omer West, Kansas City, presented a paper on "The Modern Conception of Acne", and Dr. M. J. Owens, Kansas City, spoke on "The Diagnosis and Treatment of Acute Pancreatitis".

The annual meeting of the Clay County Medical Society for the election of officers was held in Clay Center on December 21. The following officers were elected: Dr. G. W. Bale, Clay Center, president; Dr. J. B. Stoll, Clay Center, vice president; Dr. F. R. Croson, Clay Center, secretary-treasurer; Dr. C. C. Lewis, Industry, State Meeting delegate. Dr. Clifton Hall, Topeka was the guest speaker on the program.

Dr. N. P. Sherwood, Lawrence, was elected president of the Douglas County Medical Society at their annual meeting and election of officers on December 6, in Lawrence. Other officers elected to serve are as follows: Dr. R. A. Schwegler, Jr., Lawrence, vice president; Dr. E. M. Owen, Lawrence, treasurer; Dr. J. M. Mott, Lawrence, secretary; Dr. H. L. Chambers, and Dr. Lyle S. Powell, Lawrence, State Meeting delegates. Dr. Hugh Dwyer, Kansas City, spoke on "Nephritis in Children" at the January 3 meeting also held in Lawrence.

The Edwards County Medical Society held its regular meeting in Kinsley on December 16. Dr. A. C. Armitage, Kinsley, was elected president for 1939, and Dr. L. M. Schrader, Kinsley, as secretary.

Members of the Franklin County Medical Society met in Ottawa for a luncheon-meeting on November 29. Officers elected for 1939 are as follows: Dr. J. E. Wallen, Ottawa, president; Dr. W. L. Jacobus, Ottawa, vice president; Dr. F. A. Trump, Ottawa, secretary; and Dr. P. R. Young, Ottawa, treasurer.

A meeting of the Harvey County Medical Society was held in Newton on December 5. Dr. George Westfall, Halstead, presented a paper on "Gas" and Dr. M. C. Martin, Newton, a paper on "Fetus Papyraceus". Officers elected for 1939 are as follows: Dr. J. A. Wheeler, Newton, president; Dr. E. E. Peterson, Halstead, vice president; Dr. J. A. Grove, Newton, secretary-treasurer.

The Leavenworth County Medical Society held its annual election of officers for 1939. Those elected to serve: Dr. R. S. McKee, Leavenworth, president; Dr. R. H. Moore, Lansing, vice president; Dr. W. L. Pratt, Leavenworth, secretary-treasurer.

The Linn County Medical Society met in Mound City on January 2 for the election of officers for the coming year. The following were elected: Dr. J. R. Shumway, Pleasanton, president; Dr. L. D. Mills, Mound City, vice president; Dr. David E. Green, Pleasanton, secretary-treasurer.

Dr. Rex Diveley, Kansas City, presented a paper on "Recent Advances in Treatment of Fracture of the Hip" at the regular meeting of the Lyon County Medical Society in Emporia on December 5. The following officers were elected for the coming year: Dr. O. J. Corbett, Emporia, president; Dr. C. C. Underwood, Emporia, vice president; Dr. C. O. Meredith, Jr., Emporia, secretary.

The following officers were elected to serve for the coming year at a meeting of the Marion County Medical Society in Marion on December 7: Dr. G. J. Goodsheller, Marion, president; Dr. A. C. Eitzen, Hillsboro, vice president; Dr. R. R. Melton, Marion, secretary-treasurer, and State Meeting delegate.

Dr. C. O. Shepard, Independence, was elected president of the Montgomery County Medical Society at a meeting in Independence on December 15. Other officers elected to serve are as follows: Dr. J. H. Low, Coffeyville, and Dr. W. F. Coon, Caney, vice presidents; Dr. H. O. Bullock, Independence, secretary-treasurer. Dr. H. L. Snyder, Winfield, was the guest speaker on the program.

Dr. P. A. Pettit, Paola, and Dr. James T. Fowler, Osawatomie, were elected president and secretary respectively of the Miami County Medical Society at a recent meeting of that society in Paola.

Dr. H. B. Vallette, Beloit, was re-elected president of the Mitchell County Medical Society at a meeting held in December. Dr. H. L. Collins, Beloit, was elected secretary of the organization.

The members of the Pratt County Medical Society re-elected Dr. Herbert Atkins, Pratt, as president, and Dr. Athol Cochran, as secretary-treasurer, at a meeting in Pratt on December 20. Dr. J. R. Campbell, Pratt, was elected as vice president.

The members of the Riley County Medical Society met in Manhattan on December 17 for their annual election of officers. Those elected are as follows: Dr. Kellogg F. Bascom, Manhattan, president; Dr. W. H. Clarkson, Manhattan, vice president; Dr. David T. Loy, Manhattan, secretary-treasurer.



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The Marshall County Medical Society held its annual Christmas meeting on December 15 in Marysville.

The Reno County Medical Society held a meeting in Hutchinson on December 31.

The Saline County Medical Society held its annual meeting in Salina on December 8 with Dr. E. G. Padfield and Dr. E. M. Sutton both of Salina, presenting motion pictures on "Pyloric Stenosis in Infants" and "Valves of the Heart in Action" respectively. Officers elected for 1939 are as follows: Dr. Porter Brown, Salina, president; Dr. Leo J. Schaefer, Salina, vice president; Dr. George E. Stafford, Salina, secretary and Dr. O. R. Brittain, Salina, treasurer.

Dr. Fred J. McEwen, Wichita, was elected president of the Sedgwick County Medical Society at its annual banquet and election of officers on December 20. Other officers elected are: Dr. H. W. Palmer, Wichita, vice president; Dr. A. L. Ashmore, Wichita, secretary; Dr. H. R. Hodson, Wichita, treasurer.

Members of the Shawnee County Medical Society held their annual election of officers for the coming year at the meeting in Topeka on December 18. Those elected are: Dr. W. C. Menninger, Topeka, president; Dr. W. K. Hobart, Topeka, vice president; Dr. F. C. Taggart, Topeka, secretary; and Dr. M. B. Miller, Topeka, treasurer.

The Washington County Medical Society held their annual election of officers at a meeting in Washington on December 13. Dr. Fred E. Rogers, Linn, was elected as president; Dr. Donald Bitzer, Washington, vice president; and Dr. F. H. Rhoades, Washington, secretary-treasurer.

Dr. C. J. Mullen, Kansas City, was elected president of the Wyandotte County Medical Society at a meeting on December 20. Other officers elected to serve are as follows: Dr. L. E. Gowney, Kansas City, vice president; Dr. O. W. Davidson, Kansas City, secretary; Dr. Thomas Richmond, Kansas City, treasurer.

## AUXILIARY

### PRESIDENT'S MESSAGE

Dear Auxiliary Members:

The Christmas holidays are over and we are all back to work again.

I had a very inspirational trip to Chicago. What a joy recognizing the many women we met in San Francisco. The weather was ideal on the way and in Chicago.

Mrs. Tomlinson, our National President, of whom we are all so very proud, presided at the meeting November 11 in the Palmer House Hotel. The Chairmen gave their reports and we attended luncheon in the adjoining room. Dr. Bauer talked to us about Hygeia and the interests of the American Medical Association at this time.

The State Presidents gave their reports in the afternoon. Everybody is on their toes and standing behind the doctors.

Hygeia is wanted to double its subscription this year. I hope Kansas will do its part.

The State Meeting was held December 1 at the Lamer Hotel in Hays. It was well attended by officers from Cloud, Wyandotte, Labette, Wilson, Sedgwick, Ford, Central Kansas, and Barton Counties.

Central Kansas Medical Auxiliary entertained the state

officers with a 1:00 o'clock luncheon at the Lamar Hotel. Thirty-five attended.

Dr. West, our Advisory Board Chairman, gave us a pep talk and Mrs. Chas. C. Tomlinson, our National President who was our honor guest talked to us at the luncheon.

Mrs. Frank Motz, wife of the Publisher of the Hays Daily News, gave a book review of Anne Lindbergh's latest book, "Listen! The Wind." After the luncheon Central Kansas Auxiliary held their county meeting. At 6:30 o'clock we joined the Central Kansas Medical Society for dinner in the Function Room.

National Convention will be held May 15 in St. Louis and the Chase Hotel will be the National Auxiliary headquarters.

Mrs. F. E. Coffey.

The Barton County Auxiliary, newest member of our family, begins its program enthusiastically. Mrs. H. W. Jury of Claflin represented Barton County at the state board meeting in Hays and as president of her organization.

The Sedgwick County Auxiliary held their December luncheon meeting December 12 at the Innes Tea Room, Wichita. Dr. Hazel Branch, head of the Zoology department at the University of Wichita, was guest speaker.

Mrs. W. G. Emery, press-publicity chairman, will have charge of the state scrap book this year. Letters have been sent to all county organizations announcing the fact and requesting press clippings relating to Auxiliary activities of all kinds and items concerning individual members of Auxiliaries. Many items to which the policy of The Journal denies publication may be included in our scrap-book.

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KANSAS

Please let your light shine forth. Items will be inserted in the scrap-book as received, whether written or printed.

The Kansas Medical Society has gathered a mass of data relating to osteopathic educational claims. This is analysed and compared to educational requirements of doctors of medicine. Such data should be useful information for Auxiliary study.

Dr. C. Omer West of Kansas City, chairman of the advisory board of The Kansas Medical Society, interestingly discussed the possible methods of increasing the membership. Mrs. Frank Motz reviewed Anne Lindbergh's "Listen! The Wind". The ladies were guests of the Central Kansas Medical Society at a six thirty o'clock dinner at the Lamar Hotel.

#### CLASSIFIED ADVERTISEMENTS

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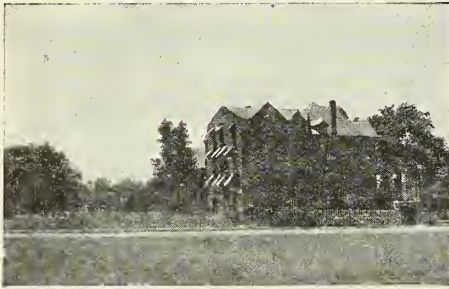
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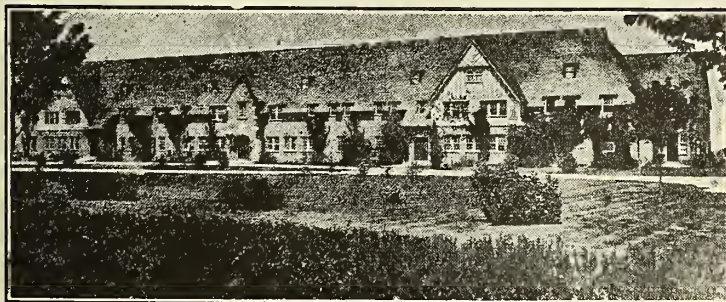
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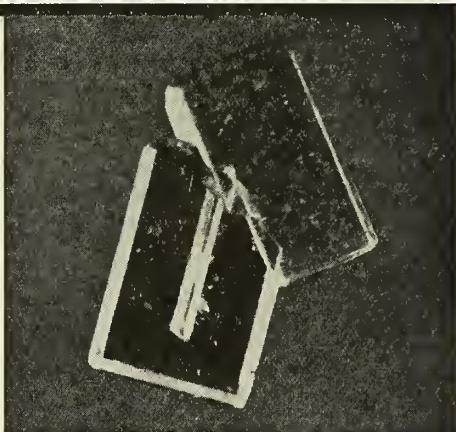
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# The Journal Of THE KANSAS MEDICAL SOCIETY

*Owned and Published by The Kansas Medical Society*

Volume XL

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Number 2

## CONGENITAL HYPERTROPHIC PYLORIC STENOSIS\*

Robert C. Fredeen, M.D., Thomas G. Orr, M.D.,  
and Frank C. Neff, M.D.

Kansas City, Kansas

The last thirty-two infants admitted to the children's ward of the University of Kansas Hospitals with the diagnosis of congenital hypertrophic pyloric stenosis form the basis of this study. In this series we have considered race, sex, age of onset of symptoms, age at time of operation, time in the hospital before operation, changes in the blood chemistry, technic of operation, operative results, mortality, morbidity, preoperative and postoperative therapy. Since the etiology is unknown and the pathology and symptoms have been frequently discussed elsewhere they are omitted in this report.

In this group there were twenty-five males and seven females. There was one negro female. The disease is commonly regarded as rare in the negro and very rare in the negro female. There were identical twin males. Twenty-nine of the patients were submitted to operation. These facts and the age of onset of symptoms, time in the hospital before operation and the type of operation are shown in Table I. The results of blood chemistry studies in nineteen patients are recorded in Table II.

### OPERATION

The Rammstedt operation was done in all cases. Local anesthesia was used in twenty-seven of the twenty-nine patients. One-half of one per cent novocaine without adrenalin or with not more than two minims of adrenalin to the ounce is advised. No sedative is given. A sweetened pacifier definitely aids in quieting the child. In rare cases ether anesthesia is advisable to prevent struggling, particularly in the older infants. Rather than strap the patient to a table or board we prefer that assistants hold the arms and legs.

An incision four to five cm. (one and one-half to two inches) long is made through the right rectus muscle near the midline beginning near the costal margin and extending downward. A high incision is a protection against evisceration of the small intestine and later disruption of the wound. The liver margin and partially distended stomach aid in preventing escape of small bowel through the wound. The incision is made down to the posterior fascia which is left intact until several through and through sutures of silk are placed. These sutures are held aside when the abdomen is opened, and are used as tractors to lift the abdominal wall if evisceration occurs and are helpful in final closure.

The stomach wall is grasped with gauze between the fingers and drawn into the wound where it is held by an assistant. With the left hand the operator is then able to grasp the pyloric tumor between the thumb and finger and hold it freely exposed in the wound until the operation is completed. The serosa and superficial fibers are incised across the tumor using great care not to enter the duodenum or stomach. With a small pointed hemostat the margins of the wound are spread apart, breaking the circular muscular fibers down to the mucosa. When the constricting fibers are severed the mucosa will bulge into the incision throughout its length. The danger point is at the junction of the pyloric ring with the duodenum where the latter forms a sulcus about the distal end of the ring as it protrudes slightly into the duodenum much as a cervix extends into the vagina. If the duodenum is accidentally opened it can be easily closed with fine sutures of chromic catgut or silk with very little danger of subsequent leakage.

There is very little bleeding and usually no ligatures or sutures are required. A portion of omentum is sutured over the incision, using a fine curved intestinal needle threaded with fine catgut or silk. The fascial layers of the abdominal wound are closed with fine chromic catgut or silk and the skin with the previously placed traction-silk sutures. (Fig. 1).

\*From the Departments of Pediatrics and Surgery, University of Kansas, Kansas City, Kansas.

TABLE I

Patient	Sex	Color	Age at onset of symptoms	Age Rammstedt Operation	No. of hours between admission and operation	Result
E.J.S.	F	W	32 days	40 days 52 days	19 hours 12 hours (2nd operation)	Cured
R.L.M.	M	W	22 days	30 days	19 hours	Cured
R.J.	M	W	11 days	48 days	17 hours	Cured
H.M.	M	W	14 days	34 days	92 hours	Cured
J.M.	M	W	21 days	48 days	5 hours	Died 24 hours after operation. No autopsy
B.M.	M	W	28 days	42 days	3½ hours	Cured
C.J.V.	M	W	17 days	28 days	20 hours	Cured
F.E.M.	M	W	18 days	34 days	6 hours	Cured
W.J.	M	W	27 days	48 days	4 hours	Cured
J.P.	M	W	21 days	35 days	52 hours	Cured
W.H.S.	M	W	21 days	41 days	21 hours	Cured
J.J.	M	W	10 days	No operation		Died 13 hours after admission No autopsy
R.L.	M	W	28 days	75 days	97 hours	Cured
J.D.E.	M	W	35 days	45 days	71 hours	Cured
C.R.S. (twin)	M	W	21 days	No operation		Died 3 days after admission. Autopsy
C.R.S. (twin)	M	W	21 days	No operation		Died 5 days after admission. Autopsy
E.M.	M	W	18 days	31 days	24 hours	Cured
J.F.C.	M	W	14 days	29 days	18 hours	Cured
G.A.C.	M	W	21 days	65 days	46 hours	Cured
Baby S.	M	W	28 days	55 days	25 hours	Cured
D.K.B.	M	W	35 days	67 days	43 hours	Cured
E.J.K.	M	W	21 days	37 days	5 hours	Cured
J.C.R.	M	W	28 days	43 days	24 hours	Cured
D.E.S.	M	W	10 days	38 days	6 hours	Cured
J.S.	M	W	14 days	96 days	64 hours	Cured
E.M.O.	F	W	30 days	41 days	17 hours	Cured
C.S.	F	W	21 days	69 days	40 hours	Cured
L.S.S.	F	W	21 days	45 days	4½ hours	Cured
J.M.	F	W	14 days	34 days	42 hours	Cured
R.H.M.	M	W	21 days	40 days	2½ hours	Cured
C.J.	F	C	14 days	49 days	216 hours	Cured
V.D.S.	F	W	10 days	49 days	4½ hours	Cured
Average	F 21.87% M 78.13%	W 96.88% C 3.12%	21.15 days	46.41 days	34.75 hours	

TABLE II  
BLOOD CHEMISTRY

Patient	Nonprotein nitrogen Mgs. per 100 cc.	Blood Urea Nitrogen Mgs. per 100 cc.	Whole blood chlorides Mgs. per 100 cc.	Carbon dioxide combining power volume per cent
E.J.S.			390	51.8
R.L.M.	54.5	9.1	500	52.2
R.J.		56.04	290 320	73
H.M.		28.7	450	73
J.M.			330	61.5
C.J.V.	125		350	90
W.J.		33	370	92
J.P.	36.6		400	62.6
J.J.		34.09	420	69
J.D.E.		11.2		
C.R.S. (twin)	39.2		390	71
C.R.S. (twin)	10/13 38.2 10/16 51.8		385 520	83.8 63.7
E.M.	33.3		300	57.9
J.F.C.			400	
G.A.C.	34.1		450	27.7
E.J.K.	75.8		400	
J.S.	11/10 30.9 11/20 29.2		360 530	89.1 57.9
R.H.M.	75		350	86.2
V.D.S.	32.6		410	80.1



## PREOPERATIVE AND POSTOPERATIVE THERAPY

This subject deserves special emphasis. Many patients with complete pyloric obstruction have been extremely dehydrated and weighed less or little more than the birth weight. Several of the patients here reported have shown an increase in the blood non-protein nitrogen, an increase in the carbon dioxide combining power and a decrease in the chlorides. In a few instances there was a definite alkalosis with symptoms of gastric tetany.

Physiologic sodium chloride or Ringer's solution is given at once under the skin in the outer surfaces of the thighs. The average quantity given at one time is 150 cc. Transfusions of 100 cc of citrated blood have been given in some of the cases.

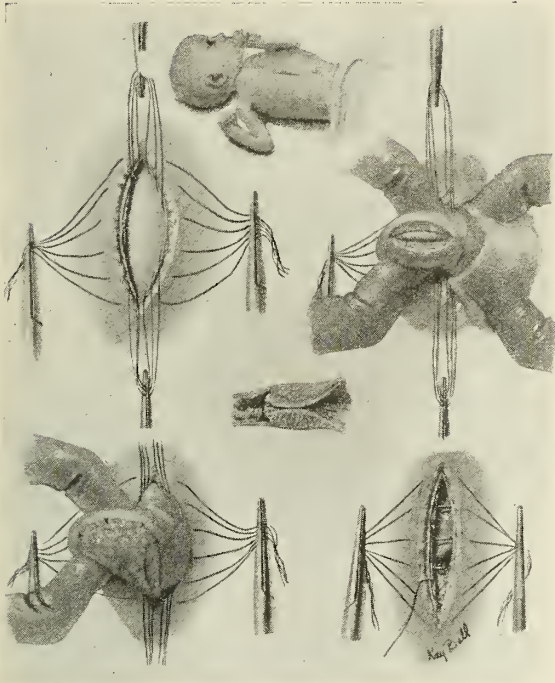


Fig. I

If the diagnosis is clear operation is advised as soon as preliminary hypodermoclysis of sodium chloride solution is completed. If the diagnosis is doubtful or the pyloric obstruction partial, gastric lavage and feedings are tried. The x-ray was used in the diagnosis of twenty-one of our patients. An x-ray study is advised if the diagnosis is at all doubtful. It is suitable for all cases provided its use does not delay operation. Retained barium should be promptly removed from the stomach by lavage with physiological salt solution.

Following the operation sodium chloride or Ringer's solution is repeated until liquid food is taken in

sufficient quantity to supply the need. Small quantities of water or diluted milk may be started within an hour or two after the patient returns from the operating room. If the baby is nursing it may be permitted to nurse for short intervals. Feedings should be increased to normal as rapidly as tolerated. Transfusions may be repeated if there is anemia. In extreme cases oxygen may be given for a day or two. These patients usually make rapid postoperative recoveries with response to food which is sometimes dramatic.

## MORBIDITY AND MORTALITY

A definite pyloric tumor was found in all infants operated upon. Post operative complications have been very few. The patients may vomit a few times but this usually ceases entirely in the first forty-eight hours. If vomiting is persistent the stomach should be lavaged between feedings. Wounds have healed well. There has been no disruption of a wound. We have had no reports of a postoperative hernia. An incomplete operation was done in one case necessitating reoperation to relieve the obstruction.

There were four deaths in this group of thirty-two patients. Twenty-nine patients were operated upon with one death. The cause of the postoperative death was thought to be peritonitis although an autopsy was not permitted to determine the source of the infection. Inspection through the wound did not reveal a leak at the site of operation.

One baby weighing six pounds and four ounces died thirteen hours after admission while being prepared for operation. Thirty minutes following a transfusion of 150 cc. of citrated blood the child became cyanotic, vomited blood and died. The transfusion may have been a factor in the cause of death. An autopsy was not permitted. Identical male twins entered the hospital at the age of nine weeks having been vomiting since they were three weeks old. Each weighed five pounds and one and one-half ounces. The birth weight was reported as seven pounds. The progress of these two patients was almost identical. Even the changes in the blood chemistry were nearly the same. Because of the extreme emaciation and dehydration of these twins an effort was made to improve their condition by transfusions and infusions. One died three days after admission and the other at the end of five days. Autopsies were granted and showed a typical congenital pyloric stenosis in each. In one the pathologist remarked that the cause of death was not clear. The positive findings were hypertrophy of the pyloric sphincter with hypertrophy of the distal stomach wall, slight congestion of the lungs and kidneys, and an unusually small thymus. The other patient showed similar findings and in

addition definite bronchopneumonia and acuteglomerulonephritis. It is probable that the principal causes of death in these patients were starvation and chemical changes incident to pyloric obstruction and vomiting.

In reviewing these three patients treated medically we are now of the opinion that they should have been operated upon a few hours after admission in spite of the poor risk. When pyloric obstruction is complete, death is inevitable without operation. There is no medical treatment for such patients beyond supportive measures to make them better operative risks.

### SUMMARY AND CONCLUSIONS

1. Thirty-two babies with congenital pyloric stenosis are reported. Twenty-nine of these were operated upon with one death, a mortality rate of 3.4 per cent.

2. The Rammstedt operation was used in each case. Local anesthesia has been the choice. No evidence of novocaine poisoning has been detected. Wound healing has been satisfactory.

3. The importance of early operation is emphasized when a positive diagnosis of pyloric stenosis is made. Preoperative supportive treatment is imperative in extreme cases and desirable in all cases. Prolonged medical treatment reduces the chance of recovery following operation.

4. When in doubt the diagnosis should be confirmed by immediate x-ray studies.

5. The importance of early postoperative feeding is stressed.

## SPINAL CORD COMPRESSION INJURIES

Broken Necks and Broken Backs with Spinal Cord and Spinal Nerve Injury\*

Ralph M. Stuck, M.D.

Denver, Colorado

The spinal cord and spinal nerves, in traumatic conditions of the neck and back, are frequently damaged, many times severely, by the over-enthusiastic well-meaning public, at the scene of the accident. The handling of the patient both at the scene of the accident and in the hospital is a problem of utmost importance.

The spinal cord and spinal nerves may be dam-

aged by pressure of the laminal arch of the upper vertebra against the lower vertebral body, or by fractures dislocations or both when the back is seriously injured or hyperflexed as in diving in shallow water, etc. In such accidents the spinal cord and spinal nerves may be compressed or contused, or in more serious cases, completely severed. The pathological changes within the cord vary from edema and petechial hemorrhage, in the milder cases, to gross hemorrhage and laceration of the cord in the more severe. In addition, there may be an associated hemorrhage from the pia mater and dura mater (subarachnoid and subdural) which produces a block in the spinal fluid circulation. Occasionally the ligaments are torn along with the dura and may press upon the cord.<sup>1</sup>

### FIRST AID

The emergency care of these patients is of the greatest importance. This should be directed first, to treating the patient himself for pain and shock, and second to preserving the spinal nerve structure when moving the patient. The following rules for emergency treatment are essential:

In cervical injuries the patient should not be moved, unless it is absolutely imperative because of shock, until there is enough help available to hyperextend the head and neck and move him gently and deliberately. In the presence of shock and unconsciousness the head and neck should still be gently hyperextended and held in a fixed position while he is being moved (Fig. I-IV). The patient can be laid on a stretcher or in bed with pillows under the shoulders and sand bags at the sides of the head, in order to keep his head fixed in a position of hyperextension (Fig. IV).

In thoracic and lumbar lesions the patient should be handled with the same degree of care. However, it is easy to hyperextend the lower spine by laying the patient on his face in a blanket or by carrying him face downward, supporting his shoulders and feet<sup>2</sup> (Fig. VI-VII).

Twisting the patient is dangerous and should be avoided when turning him in bed.

Morphine may be used for the relief of pain although it masks neurological symptoms and its use is debatable.

If shock is present it is treated by the usual supportive measures—warmth, fluids and blood transfusion.

### DETERMINATION OF INJURY

It is important from the medico-legal standpoint and from the standpoint of the progress of the patient, to determine the amount of nerve injury sustained when the patient is first seen, whether it

\*Read before the Ford County Medical Society November 10, 1938 at Dodge City and the Finney County Medical Society November 14, 1938 at Garden City.





FIG. 1

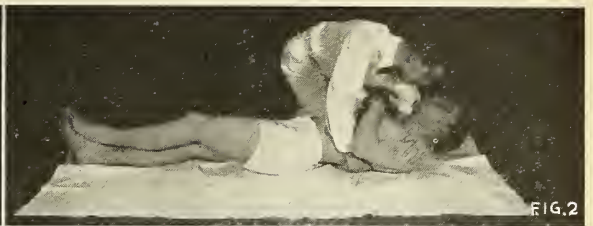


FIG. 2



FIG. 3



FIG. 4



FIG. 5



FIG. 6



FIG. 7

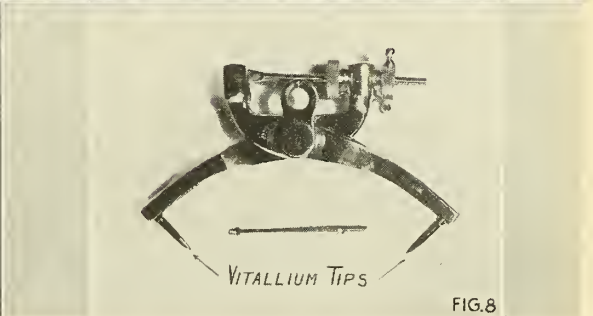


FIG. 8

be at the scene of the accident or in the hospital.

A brief but adequate examination can be performed if the following observations are made:

1. Ask the patient to move his hands and feet gently.
2. Observe the skin area involved in sweating and gooseflesh as this will usually correspond to the sensory level of the lesion.
3. Observe and record the sensory level, reflexes, motor power and level of pain.
4. Pinch the great toe. If there is no sensation, the spinal cord is probably completely

severed.

5. Note any angulation of the spine.

6. Examine the back of the throat for any evidence of forward dislocation of the first four cervical vertebrae.

7. Do not press upon the spinous processes since there is danger of producing further nerve damage.

8. X-ray the patient in the position of hyperextension and never hesitate to x-ray the entire spine if the first examination is not satisfactory.

Having completed the initial examination and first aid care, the examiner should direct his efforts toward finding whether the spinal cord is completely or partially severed. This may seem of academic interest only, but it is valuable in following the progress of the patient and in answering the question, "Will he ever walk again?"<sup>3</sup>

(A) If the spinal cord is completely severed these symptoms will be found:

In the stage of spinal shock, the muscles will be toneless and flabby, the superficial and deep reflexes will be lost and there will be a retention of urine and feces. In the stage of reflex activity, there will be a "Mass" reflex response in the extremities below the level of the lesion with any painful stimulus in this area. This response is characterized by a flexor spasm of the muscles of the abdominal wall and extremities, evacuation of the filled bladder, sweating in the paralyzed sensory area, and occasionally priapism and ejaculation. In the terminal stage there is gradual failure of all reflex responses, and this may also develop if severe infection or debility occurs.

Deep pressure pain in the great toe may be lost and is evidence of complete irrecoverable sensory and motor loss.<sup>4</sup> The nerve tracts carrying deep pain sense (position, vibration, bone, tendon, and deep pain) from the great toe to the brain, in man, are situated centrally in the spinal cord and are thus protected from injury. For this reason deep pressure pain in the great toe is less likely to be abolished and is abolished only in severe injuries to the spinal cord.

(B) If the spinal cord is contused and not completely severed, these symptoms will be found frequently:

There will be a partial paralysis of the muscles, including the sphincters, and an incomplete sensory loss below the level of the lesion. Deep pressure pain will be present in the great toe. Extensor responses may be present from any painful stimulus elicited below the level of the lesion and the patient may lie in bed in hyperextension. If extensor responses are present his movements in response to pain will be incoordinate and spastic. There may be an early appearance of the Babinski sign, a failure to evoke the "Mass" reflex and a history of absence of spinal shock. The paralyzed extremities will possess moderate tone and some degree of muscle function with subtotal anaesthesia.

#### LEVEL OF CORD INJURY

It may be possible to locate the level of the nerve lesion from a brief neurological examination without the help of the x-ray if the following points are borne in mind:

When there is damage at the level of the first or second cervical segment there is usually respiratory difficulty of the medullary type characterized by early loss of consciousness, stertorous, irregular and shallow breathing, rapidly leading to death.

Injury at the level of the third or fourth cervical segment also leads to respiratory difficulty but of the phrenic-intercostal type. This type of respiratory difficulty is recognized by a late loss of consciousness and an asphyxia as the result of inability to expand the chest. These patients may live several days or weeks.

With injuries at the fourth cervical segment the patient will lie with his arms abducted, forearms flexed and rotated outward because of a paralysis of the deltoids, biceps, brachialis and supinators.

The muscles involved when injuries are at other spinal levels are these:

- C5 deltoid
- C6 biceps
- C7 triceps
- T1—T8 the corresponding intercostal muscles
- T9 and T10 upper abdominals
- T11 and T12 lower abdominals
- L2-4 adductors of the thigh
- L4 dorsiflexors of the foot

One cannot be expected to remember all of these details at each examination but a few points in general can be remembered.

For instance, in cervical lesions extremely high fever is frequently seen as a result of a paralysis of sympathetic nerves with a loss of sweating and heat conduction. Priapism is often observed. Horner's syndrome (a unilateral contraction of the pupil—drooping of the lid—enophthalmos—and a loss of sweating over the face) may be seen in lower cervical lesions. Sensory and motor paralysis are usually found below the level of the lesion.

Impairment of chest expansion with an associated level of sensory loss indicates a thoracic lesion.

Below the thoracic region, motor and reflex responses are usually sufficient to localize the lesion.

Pain, evidence of contusion to the back, spinal deformity, the position in which the patient is found, and, of course, the x-ray are all of definite localizing importance.

#### TREATMENT

The operative care of these patients may be divided into three periods: (1) the period of immediate or emergency care, (2) the period requiring a brief observation, and (3) the period, days or weeks after an injury.

Shock is usually not present when these patients are first seen but, if it is present, it should be treated



in the usual way by application of warmth (not heat), injection of fluids and blood transfusion.

As a preliminary to any operative procedure, in the routine neurological examination a spinal puncture should be performed. Subarachnoid hemorrhage will be manifested by blood in the spinal fluid and if meningitis is present there will be an increased number of white blood cells. Xanthrochromic (yellow) spinal fluid or clear fluid with increased protein, which clots on standing, (Froines Syndrome) is indicative, in the late cases, of a partial or a complete spinal block. The Queckenstedt test is of great assistance and should be performed with the utmost care. In cervical lesions it is not advisable to compress the jugular veins manually because of the danger of producing further nerve damage. The Grant blood pressure cuff method is preferable as it is safer. In this procedure a blood pressure cuff is substituted for manual jugular compression.<sup>5,6</sup>

#### IMMEDIATE OPERATIVE CARE

Orthopedic care is indicated first in these patients. By this I mean they should all be placed in a position of hyperextension with traction. For lesions in the cervical region this is best accomplished by applying the Crutchfield skeletal traction tongs<sup>7</sup> (Fig. VIII). In the thoracic and lumbar regions reduction is most satisfactorily accomplished in the hyperextension frame or body cast.

Manipulation of the spine under an anaesthetic, which has been advised for fractured vertebrae, is contraindicated because of the danger of further cord damage.

The indications for immediate laminectomy are, therefore, demonstration of spinal cord or spinal nerve compression, or progression of already existing neurological symptoms.

#### OPERATION AFTER A SHORT PERIOD OF OBSERVATION (twenty-four to forty-eight hours)

Laminectomy may be delayed twenty-four to forty-eight hours and in the cases without definite complete spinal block as demonstrated by the Queckenstedt test, careful repeated neurological examinations may reveal that the patient is improving. If so, operation is not necessary for in many cases hyperextension and traction are all that are needed.

Laminectomy is indicated where there is a complete spinal block, where there is rapid progression of symptoms and where bony fragments may be seen by x-ray to be impinging upon the cord.

In any questionable case laminectomy should, of course, be done either early or late if there is any

suspicion of spinal cord or spinal nerve compression.

#### LATE OPERATION

Operation is still indicated a week or more after the injury if it can be demonstrated that spinal cord or spinal nerve compression exists. In the late cases evidences of compression are: (a) x-ray changes in the position and condition of the vertebrae, (b) spinal block as demonstrated by the Queckenstedt test and lipiodol injection, (c) increased protein in the spinal fluid and (d) the aforementioned neurological findings.

#### OPERATIVE PROCEDURE

Laminectomy should be carried out with the patient in a position of hyperextension and with traction to the head whenever this is possible. In this position no further contusion of the cord and nerves is likely. Compressing bony fragments and torn ligaments should be removed, subdural clots evacuated, intramedullary hemorrhage aspirated (not opened and drained because the edema of the cord may completely herniate that portion of the spinal cord), severed nerves, particularly in the cauda equina, should be sutured, and a single sensory root should be cut where the corresponding ganglion has been crushed (to prevent posttraumatic root pain).

#### POSTOPERATIVE CARE

The most important part of the postoperative care of these patients is adequate nursing. This entails constant observations for sudden rises in temperature (in cervical lesions) for distended bladder, bladder infection, and for skin ulceration (in any of these lesions.) The patient should be turned frequently and with the utmost care.

The treatment of the bladder is second in importance only to good general nursing. It has been customary to catheterize the patient, where there was a retention, every eight hours for about the first week and then to insert a retention catheter with an automatic irrigating device that could be irrigated approximately every four hours. The catheter was changed at least once a week. The new tidal drainage of Munro should be used where this apparatus can be made. By this method the tone of the bladder remains unaltered and bladder infections are minimal.<sup>10</sup> Suprapubic drainage I believe is indicated now only in severe bladder infections.

To prevent the formation of decubitus ulcers frequent turning, frequent changing of soiled lined, and the use of special soft mattresses such as the Beauty Rest are essential. The skin must be kept clean, dry and preferably oiled, and the sheets should be clean, smooth and unstarched. All attendants should be

warned of the danger of burning the patient with hot water bottles.

Should a decubitus ulcer develop, it is best treated by using Dakin's dressings locally and by the administration of sulphanilamide. Careful application of the heat lamp is also beneficial.

Physiotherapy (heat, massage and passive exercise of the extremities) should be pursued actively in dealing with flaccid muscles, and cautiously with the spastic ones.

Occupational therapy should be directed toward putting the patient in a condition to serve himself and his family. Surprisingly enough there are many jobs which these patients can perform.

### SUMMARY AND CONCLUSIONS

1. Proper first aid care of spinal injury cases will often mean that the patient may walk, while poor handling may lead to nerve injury with paralysis and, in many cases, death.

2. A brief neurological examination at the scene of the accident is valuable both from a medico-legal and a prognostic standpoint.

3. All neurosurgical procedures in these cases are indicated only after careful repeated neurological examinations.

4. Laminectomy with freeing of spinal cord and spinal nerve pressure is indicated where any of the following are present:

- a. Progressive paralysis.
  - b. X-ray evidence of spinal cord or spinal nerve compression.
  - c. Spinal block as demonstrated by the Queckenstedt test, increased spinal fluid protein, and lipiodol injections.
5. With adequate nursing, bladder infections and decubitus ulcers do not develop.

6. Occupational therapy will rehabilitate many of the paralyzed patients.

### BIBLIOGRAPHY

1. Courville, Cyril B.: *Pathology of the Central Nervous System*, Pacific Press Publishing Association, Mountain View, California, 1937.
2. Watson-Jones, R.: *The Results of Postural Reduction of Fractures of the Spine*, *The Journal of Bone and Joint Surgery*, 20:567; 586, July, 1938.
3. Davis, Loyal: *Neurological Surgery*, Lea & Febiger, Philadelphia, Pennsylvania, 1936, Chapter VII.
4. Naffziger, H. C.: *Personal Communication*.
5. Grant, W. T. and Cone, W. V.: *Graduated Jugular Compression in the Manometric Test for Spinal Subarachnoid Block*, *Archives of Neurology and Psychiatry*, 32: 1194-1201, December, 1934.
6. Grant, W. T. and Cone, W. V.: *Graduated Jugular Compression with Manometric Tracings of Spinal Fluid Pressure*, *Archives of Neurology and Psychiatry*, 36: 1317-1322, December, 1936.
7. Crutchfield, W. G.: *Treatment of Injuries of the Cervical Spine*, *The Journal of Bone and Joint Surgery*, 20: 696-704, July, 1938.
8. Venable, C. S. and Stuck, W. G.: *Fractures: Recent Advances in Treatment with Non-electrolytic Metal Appliances*, *Journal Indiana State Medical Association*, 31: 335-342, July 1, 1938.
9. Venable, C. S. and Stuck, W. G.: *Electrolysis Controlling Factor in the Use of Metals in Treating Fractures*, *Journal American Medical Association*, 111: 1349-1352, October 8, 1938.
10. Munro, Donald: *The treatment of the Urinary Bladder in Cases with Injury of the Spinal Cord*, *American Journal of Surgery*, 38: 120-136, October, 1937.

## ANEMIAS

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It is generally accepted that there are three sources of blood cells in the human body. From the bone marrow, from the lymphoid or adenoid tissue and from the reticulo-endothelial tissue.

From the bone marrow comes:

A. Adult red cells. The mother cell being the (erythroblast) which is seen only in bone marrow, which in turn gives rise to the normoblast or nucleated red cells which in turn loses its nucleus and becomes the normal red cell.

B. Leukocytes have their origin in the bone marrow and the mother cell is called the myeloblast which becomes the myelocyte and then the normal leukocyte.

C. Blood platelets are formed in the bone marrow, the mother cell being the (megakaryocyte).

From the lymphoid tissue comes the:

A. Lymphocytes or mononuclear cells whose mother cell is the (lymphoblast).

From the reticulo-endothelium comes:

A. The large mononuclear

B. The transitional

C. Megaloblasts (pathological cells which are a response to severe anemias). The function of the cells are fairly well known to all. The red cells to carry oxygen from the lungs to the body tissue.

The leukocytes are purely protectors by means of their various enzymes they digest or ingest bacteria and protein material. The eosinophiles having the best protolytic powers, and they increase in number when the body is invaded by a foreign protein or parasites. The platelets command the clotting and retraction of the blood. The mononuclear cells transport food from the lacteals of the intestines to other parts and also function as phagocytes. The large mononuclear and transitionals have powers unknown. They do have granules which probably have a protective power by enzyme formation.

The megaloblast is an emergency hemoglobin carrying cell. In the embryo red cells are derived from this cell but as soon as the bone marrow starts to work this cell appears in the blood stream only in severe anemias.

Most men classify anemias according to the physiological function or dysfunction as the case may be into three types of anemia.

A. Due to slow production (primary).

B. Due to rapid loss (hemorrhage) or secondary.



### C. Due to rapid destruction (hemolytic).

While anemias concern only the red blood cells and hemoglobin one has to know about the white blood cells, and the blood platelets all of which seem to suffer.

Tests universally used in anemia classification are:

A. Red cells per. cc undiluted blood test (known by all).

B. White cell count procedure also known by all.

C. Hemoglobin (easily determined).

D. Color index is meant the per cent hemoglobin in each cell and is determined by dividing the per cent of hemoglobin by the per cent of red blood cells or a simpler method is to merely multiply the per cent hemoglobin by 50,000 and divide by the number of red cells found in the count. For example; if the reds were 990,000 and the Hg. twenty per cent,  $20 \times 50,000$  equals 1,000,000. 1,000,000 divided by 990,000 makes the color index 1 plus.

E. Volume index is the relation to normal and is a measure of the relative size of the red cell. To determine this ten cc of patients blood is centrifuged with two cc of 1.6 per cent sodium oxylate and the volume compared with ten cc of normal blood treated the same way. A higher volume index shows the cells are larger and thus contain more hemoglobin.

F. Fragility of erythrocytes is to determine the stage at which hemolysis of the cell starts and when complete, and is determined by tests with different percentages of saline solutions. Normally hemolysis begins around 0.42 per cent saline and ends or is complete 0.36 to 0.32 per cent. Thought to mean a weak state when fragility is greater than normal.

G. Van den Berg Test is used to determine the amount of bilirubin in the blood. This is really a liver function test. The fact that bilirubin when mixed with an alcoholic solution gives a reddish color reaction in the presence of diazo reagent in some cases immediately and others delayed, and in some cases the color becomes more intense with time. Van den Berg reasoned that bilirubin must be of two different types. That in certain jaundice cases a positive color appears immediately without the alcoholic solution and gives a prompt or direct reaction signifying an obstruction in the bile ducts and hepatic ducts. Delayed reaction signifies an excessive blood destruction and deranged liver cell function. The slow color test with deepening in color or biphasic signifies both obstruction and derangement as found in infective cirrhosis and malignancy. This test is used in a differential diagnosis of jaundice.

The differential diagnosis of anemia is not diffi-

cut in the last stages of the disease usually but often times it is difficult in the beginning.

I wish at this time to report the following case which is one of those difficult cases.

A white man, age forty-eight came to my office August 27, 1938 complaining of weakness, shortness of breath and jaundice of a weeks duration. He had been well all of his life except for pneumonia at three years of age and small pox at twelve. His family history was negative except his first wife died two years ago from tuberculosis of the lungs. He was married the second time. At the time of his first visit he presented the following picture. Temperature 102. Respiration 24. Pulse 88. He had a systolic heart mummur heard over his left chest. Blood pressure 150/62. His liver was greatly enlarged and spleen felt to be three times its normal size. His ankles pitted on pressure and the following is his first blood picture:

Red cells 990,000, white cells 11,900, hemoglobin 20 per cent. eosinophiles 2 per cent, stabkernige 6 per cent, segmentkernige 71 per cent, lymphocytes 13 per cent, monocytes 8 per cent, total polys. 77 per cent, Fragility .40/.28. control being .43/.34. The sedimentation test showed twenty mm in forty-five minutes. His blood was type (2) Moss. His stomach content showed an absence of free hydrochloric acid. The Van den Berg was delayed. The color index was 1. plus and his icterus index was 23. He had a negative Wassermann and showed a trace of albumin in his urine. He was immediately put on a pernicious anemia diet with liver in all forms both by mouth and by hypo. He was given dilute hydrochloric acid with his food but showed no rise in either the hemoglobin or number of red cells. He was then given three blood transfusions after which he showed the following blood picture. Red cells 1,200,000, white cells 6,500, Hg 23 per cent, color index 1.1. The white cells showed eosinophiles none, stabkernige 6, segmentkernige 50, lymphocytes 30, monocytes 8, total polys. 55 per cent. The red cells showed numerous erythroblasts. Anisocytosis, poikilocytosis and several stippled reds, which was the same picture of the red cells at the beginning of treatment.

In spite of liver medication and the blood transfusion the liver enlarged the spleen became more palpable and the patient developed a marked ascites and swelling of both lower limbs. For twenty-four hours following each blood transfusion the patient claimed he was much better. However the later transfusions were usually followed by a severe chill and at one time he developed 26,000 white cells. In twenty-four hours more his skin would show a lemon-yellow color and he would become short of breath again. Fifteen blood transfusions were given

with an average of 400 cc at each time. Death occurred just three months from the date of onset, the diagnosis being pernicious anemia, acute nephritis.

### BIBLIOGRAPHY

1. Laboratory Medicine—Nicholson, February 1937.
2. Laboratory Guide—Hyden, 1923.
3. Practice of Medicine—Tice, 1937.
4. Medical Clinics of N. A.—December 1936.
5. Digest of Treatment—October 1938.
6. Principles and Practice of Medicine—Osler.
7. Case Records Community Hospital, Beloit, Kansas.

## REGIONAL ILEITIS

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Regional ileitis was first described as a clinical and pathological entity by B. B. Crohn, in 1932, as a benign inflammatory lesion, involving most commonly the lower ileum, ascending and first portion of the transverse colon. Since that time it has been well shown that the condition, although having predilection for these areas, is not necessarily limited to these, but may involve the entire ileum or the entire colon. Prior to this time, many conditions had been described in the literature, of a granulomatous nature possessing similar symptomatic and pathological features which were often confused for malignant conditions. Shortly following this, Harris used the term, cicatrizing enteritis, which only signified a further end stage of the same process. Since the definite establishment of the clinical entity of regional ileitis, Jackson, in 1937, reviews the literature reporting a total of 219 cases to date, thus showing the rarity or missed diagnosis of this condition.

### ETIOLOGY

The etiology is still unknown. Whether the condition is due to repeated intestinal infections of the acute enteritis group or due to bacterial invasion of the intestinal wall from repeated low grade appendiceal or retro-cecal or mesenteric lymphatic infections, is a very interesting conjecture. However, the heavy bacterial flora of the ilio-cecal region in itself should never result in infection of the bowel wall unless there has been some exciting factor giving entry of the bacteria into the submucosa. Infection of the bowel can cause diarrhea and as this is one of the symptoms of an early regional enteritis, the inflammatory condition possibly may be bacterial in origin. Mesenteric lymphadenitis is most common in the glands of the lower ileum, but their etiology is unknown (Christopher Surgical Pathology P. 1180). That mesenteric lymphadenitis is always bacterial is not positive as many glands are found on culture to be sterile. It is possible that a common cause is the

absorption of incompletely or improperly digested protein material from the bowel. Mesenteric lymphadenitis is undoubtedly related to regional enteritis, both possibly being due to low grade infections of the lymphatic system. Both are common in young adults and either may undergo complete spontaneous cure or may go on into a chronic form. Probststein and Gruenfield believe that the stagnation of fecal current at the ileocecal valve predisposes to greater absorption of bacterial material by the great abundance of lymphoid tissue present in this area.

The only other specific infections of note of the small bowel are tuberculosis and typhoid fever, each of which is a definite etiological entity. Syphilis is very rare and actinomycosis is practically unknown in this region. Asiatic cholera, bacillary dysentery and amebic dysentery are likewise separate entities.

Reichert and Mathes believe the two dominant features in etiology are a low grade infection with a concomitant chronic lymphedema.

### PATHOLOGY

The lesions of the various intestinal segments are pathologically identical, representing a progressive disease passing through various phases, from an acute process to hyperplastic changes and finally scar tissue production with destruction of the normal histology of the intestine. Associated with this may occur various sequelae, such as mesenteric abscess, intestinal perforation and fecal fistula. The symptoms of the lesion will also be progressive and changing according to the pathological phase present at the time. Patients observed over a period of years will, as a rule pass through all phases from acute to chronic, with destruction of all normal function of the intestine involved. The diseased bowel presents no definite diagnostic characteristics, it is non-specific, showing only various phases of inflammatory reaction. There may be an acute inflammation with edema and hyperemia with enlarged, soggy, hose-like intestine of a maroon color. Hyperplasia of the regional mesenteric gland is usually present. The mesentery may or may not be involved, and this determines what type of treatment is necessary. The intestinal involvement is either segmental or patchy, the tendency being toward more patchy involvement in the colon and segmental in the ileum; the descending colon only being involved in more rare instances and as the disease progresses. The microscopic study presents the usual acute, subacute or chronic inflammatory tissue, with occasional giant and epithelioid cells in the later stages. No specific changes are present and one phase may be merged with the next.



## SYMPTOMATOLOGY

Due to the lack of definite specific symptoms, many innocent appendices have been and are still being removed for this condition, while the real source of the trouble is overlooked. The characteristic appearance and symptoms have been classically described by Crohn, Gingbury, and Oppenheimer and have not been greatly added to except by Colp in 1934 and since Brown, Barga and Weber have reported several cases involving the ileum, cecum and part of the ascending colon. More recently an article by Crohn and Rosenah states their first reports of the disease affecting only the ileum were incorrect, as they have since experienced it in all parts of the colon as well as the ileum.

Crohn has grouped the cases into four clinical types representing progressive stages which may be true types or mixed, but do help to explain the symptomatology experience in relation to the pathology present.

### GROUP I

The symptoms of this group resemble those of acute appendicitis: pain in the right lower quadrant, cramps, fever and leukocytosis. At operation the mesenteric glands of the ileo-cecal region are acutely inflamed and hyperplastic, and the terminal ileum is edematous with an acute inflammatory reaction throughout its walls. The appendix may be involved by continuity, although showing no mucosal inflammation.

### GROUP II

The symptoms of this group are diarrhea, cramps, with blood and mucus in the stool. The patient may become anemic, listless and even run a low grade fever.

### GROUP III

This is the stage of stenosis which follows the second stage or ulcerative stage. The lumen of the bowel becomes narrowed due to the thickening of the walls of the intestine and the stenotic effect of cicatrizing ulcerations of the mucosa. The symptoms are those of a partial intestinal obstruction with cramp like pains, vomiting, constipation and with a probable palpable mass and visible peristalsis; the degree of symptoms depending upon whether the obstruction is high or low in the intestinal tract.

### GROUP IV

The fistula stage. In this group are those cases in which rupture of the intestine has occurred and fistula have formed either internally or externally through the abdominal wall.

## DIAGNOSIS

The diagnosis of regional ileitis is not easy as may be judged from its non-specific symptomatology and pathology. It is usually made at operation after a diagnosis has been made of ulcerative colitis, or appendicitis, or malignancy with a partial intestinal obstruction. The only definite pre-operative diagnostic factors are the x-ray findings, which, however, are not present in the early stages. In the stenotic stage a filling defect develops in the terminal ileum or whatever segment of bowel is involved with a mild stasis and distention proximal to the filling defect. Later, as the stenosis develops more, there appears what is known as the characteristic "string sign" of Kantor, which is simply a thin string of barium passing from a dilated proximal loop of intestine through the stenotic portion into the normal portion of distal bowel segments.

## DIFFERENTIAL DIAGNOSIS

Acute appendicitis is often difficult in the early stages to differentiate from the early stage of a regional ileitis. However, the more acute symptoms, with muscle rigidity, definite localization of pain, vomiting, increase in the white blood count and an increase in embryogenic white cells suggest more an acute suppurative process of the appendix.

Mesenteric lymphadenitis occurs more often in the younger individual and presents a picture with tenderness in the right ileac fossa with absence of muscle spasm and other signs of peritoneal irritation.

Ileocecal tuberculosis is rarely diagnosed before surgery, unless pulmonary tuberculosis is present or some other evidence of tuberculous enteritis or peritonitis.

Intestinal obstruction due to any intrinsic or extrinsic mechanical cause must be eliminated.

Benign neoplasm of the small intestine and colon are exceedingly rare but may grow in such a manner that they may give obstructive signs and bleeding. The malignant tumors are adenocarcinomas, carcinoid or argentaffine tumors which most commonly occur in the appendix.

## TREATMENT

The method of treatment as may readily be seen, will vary and depend upon what stage of the inflammatory process is present. Karl Meyer believes that the state of the mesentery may be an indication as to treatment; that is, whether to resect, short circuit or leave alone.

Treatment must be governed by the progress of the disease and condition of the patient. Many acute cases must occur in which spontaneous recovery results. It is a question even in cases on which resec-

tion are done, whether or not the process will recur involving adjacent areas of the ileum or colon, until the question may arise whether it is advisable to resect extensive sections of bowel as a primary procedure. Again this must be governed by the condition of the patient and what he is able to stand. Mixer prefers a one stage operation with resection of the diseased portion, but feels that multiple stage operations are indicated where abscesses or fistula exist. Meyer believes that a short circuiting operation may suffice if the mesentery is only slightly involved and that spontaneous recovery of the inflamed bowel will occur if the mesentery is not involved. Treatment then must be divided, not only as to the condition of the patient, but also by the extent of the lesion and if it does not recover spontaneously then surgical intervention is indicated as early as possible before fistula and abscess formation is present and before stenosis has produced complicating sequelae.

### CASE REPORT

R. K., age thirty-seven had cramping pains in right lower quadrant for three weeks. For the past six months has complained of bloating and some loss of weight and strength; in fact believes he has had an uncomfortable feeling in right lower part of his abdomen for the past year. Has been somewhat constipated for the past year, with passage of small caliber stools. Three weeks ago he had sudden, severe pains with a full bursting feeling in the right lower abdomen. The following three days the abdomen was sore and has since remained tender. No blood had been passed from bowel. He has lost fifteen pounds past few weeks.

Physical examination was essentially negative, except for the following abdominal findings: abdomen flat, a soft, definite, palpable, oblong, non-tender, firm, slightly movable mass in region between the lower pole of right kidney and cecum. Mass appears on palpation to be posterior and lateral to the normal cecal area. Mass is about eight by three cm. and can be brought definitely between the examining hands.

Laboratory findings: Urinalysis sp. gravity 1.025, neut. sugar negative, albumin, neg. acetone, neg. bile. occ. epith. cells, pus cells 2 to 3 per H. P., R. B. C. 4 to 8. Blood Count—HB. 80 per cent, R. B. C. 4,120,000 W. B. C. 8,600. Small lymphocytes 18 per cent. Large lymphocytes 3 per cent. Large mononuclears 7 per cent. Polymorphoneutrophils 72 per cent.

Cystoscopy of kidneys was essentially negative. Barium meal was essentially negative. Barium enema passed in normal pattern up to two inches below hepatic flexure, at which point it could be made to

pass into the ascending colon only with difficulty and in an irregular formation; a defect was visible on the medial and posterior wall of cecum and ascending colon. The defect was smooth, with only an apparent thickening of the ascending colon and resulting narrowing of the lumen.

### DIAGNOSIS

Probably adenocarcinoma of cecum. At operation a long curving incision, starting over the mass and extending into right hypochondriac area toward the right kidney was used in order to approach the mass laterally. The mass was dissected free and excised widely between clamps with cautery. Anastomosis was made of the side of ileum to the stump of the ascending colon at hepatic flexure. A small catheter was placed in the ileum four inches above anastomosis. No regional lymph glands were palpable and no involvement in right lobe of liver noted. The patient made an uneventful recovery.

The pathological examination of the specimen showed a hard, slightly friable, hose-like mass of a deep reddish-purple color, involving about four inches of ascending colon and cecum. Section through the mass shows hard, white, cellular tissues spreading out into the submucosa, muscularies and serosa of the colon. The involvement extended around the entire circumference of the colon except for an inch of the medial circumference area.

Microscopic examination revealed only chronic inflammatory tissue involving and replacing the wall of the ascending colon.

This case is presented as a regional enteritis, Group III, by Crohn. Clinical progress since operation has been uneventful and the man is now well and perfectly healthy one year following.

### SUMMARY

1. Regional ileitis is a clinical and pathological entity which is rarely diagnosed preoperatively.
2. Regional ileitis most commonly involves the lower portion of the ileum, ascending and first portion of transverse colon.
3. The etiology is unknown; but is in all probability due to a slow, low grade infection of the lymphatic system, similar to mesenteric lymphadenitis.
4. The pathology depends upon the stage of the inflammatory process from acute to chronic, of the involved bowel, its mesentery and mesenteric lymph glands.
5. The symptomatology of the early stages of the disease closely resemble acute appendicitis and many innocent appendices have been removed for this cause.
6. The symptoms are progressive from the acute



inflammatory stage to the chronic stage with cicatrization and stenosis of the bowel with its concomitant symptoms of bowel obstruction, multiple abscesses and fistula formation.

7. The only definite physical finding preoperatively is the x-ray finding of a filling defect in the terminal ileum or involved colon with distention above and the characteristic "string sign."

8. Treatment consist of conservation during the extreme early stages of the process, as a few cases may undergo spontaneous recovery.

9. Those cases which present all the signs and x-ray findings of a cicatrizing process should be operated with wide resection of the diseased bowel if the condition of the patient permits.

10. The mortality rate is high in this condition, each case must be individualized and surgical intervention decided accordingly.

### BIBLIOGRAPHY

- Bell, L. P. *Surgery, Gynecology and Obstetrics*, 1927, 45:465.  
 Bockus, H. L. & Lee, E. *American Surgery* 102:412 (September 1935).  
 Brown, P. W., Barga, J. A. and Weber, H. M. *American Journal Digest Dr.'s* 1934, 1:426.  
 Colp, Ralph. *Surgical Clinic North America*, 14:443.  
 Christopher, Fred. *Christopher Surgery* 1936, P. 1180.  
 Crohn, B. B., Ginsbury, L. and Oppenheimer, L., *Journal American Medical Association* 1932, 99:1333.  
 Erb, O. H. and Farmer, A. W. *Surgery, Gynecology & Obstetrics* 61:6 (July 1935).  
 Erdman, J. F. and Burt, C. V. *Surgery, Gynecology & Obstetrics*, 1935, 57:71.  
 Jackson, A. S. *Surgery, Gynecology & Obstetrics*, 65:1-10 (1937, July).  
 Kantor, J. L. *Journal American Medical Association*, 1934, 103:2016.  
 Koester, H., Kasman, L. P. and Sheiufeld, W. *Archives of Surgery*, 32:789 (1936, May).  
 Meyer, K. A. and Rose, P. A. *Surgery, Gynecology & Obstetrics* 62:977, (1936, June).  
 Musick, V. H. *Journal Oklahoma Medical Association* 29:280 (1936, August).  
 Probst, J. G. and Gruenfeld, G. E. *American Surgery* 1936, 103:273-278.  
 Reichert, F. L. and Mathes, M. E. *American Surgery* 1936, 104:601.  
 Rosenblate, A. J., Goldsmith, A. A. and Strauss, A. A. *Journal American Medical Association* 106:1797 (1936, May 23).  
 Wilensky, A. V. and Hahn, L. J. *American Surgery*, 1926, 83:812.

From fifteen to twenty servings of most of the common fruits and vegetables are required to yield the same amount of calcium as is contained in one pint of milk.—Hygeia.

Mothers and fathers can do more for their children than most vocational clinics, for it is the atmosphere of the home that is too often at fault.—Hygeia.

Of all the special sense organs the eyes are the most advanced in structure and function.—Hygeia.

## INTESTINAL OBSTRUCTION, GENERAL CONSIDERATIONS, AND RESULTS OF LOW INTESTINAL INTUBATION\*

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Intestinal obstruction is one of the few surgical diseases in which the mortality rate remains high in spite of progress in the other branches. It is agreed<sup>24,25</sup> that the largest factor in this is the tendency on the part of the patient to delay medical assistance until the general condition is very poor. In many series of cases<sup>25</sup>, it has been shown that the lowest mortality rate is seen in patients coming to treatment within the first 12 hours. When seen after twenty-four hours have elapsed since onset of symptoms, the mortality rate remains very high, forty-five per cent to sixty per cent in hospital series and probably higher if all cases were recorded. Because of early localizing signs, external hernias of the intestine with strangulation have a negligible mortality rate while simple obstruction due to adhesions, internal hernias, volvulus, torculus, etc. have a much higher rate.

A series of twenty consecutive recent cases were chosen from the records of Wesley Hospital in Wichita, Kansas, in which the primary diagnosis was intestinal obstruction of some type. These were divided into early and late cases, those showing strangulation and those of a simple character in which there was no early strangulation of tissue.

Mortality is found as follows:

In those operated upon,

1. In the first twelve hours, none died, (four cases, all strangulated.)
2. In the second twelve hours, none died, (two cases.)
3. After forty-eight hours, four died out of six operated upon, (all simple.)

Mortality rate of operated cases is thirty-three and one-third per cent.

Of those on which operation was not performed,

1. Two were strangulated, both died.
2. Four were simple, and two died.

Mortality rate for cases not operated is sixty-six and two-thirds per cent.

Of those not operated upon, two were seen in the first twelve hours, one died, fifty per cent mortality. Six were seen after forty-eight hours,

\*Presented before the Sedgwick County Medical Society, January 3, 1939.

three died, fifty per cent mortality.

Of the twenty cases, only one seen in the first twelve hours died, five per cent.

Of those seen after forty-eight hours, sixty-six per cent of the operative cases died and fifty per cent of non operative cases died.

Overall mortality, forty per cent.

This is quite representative of the general run of results. Some, however, are lower. Presbyterian Hospital in New York City is reported as having a sharp drop in the past eight years; 48.6 per cent to 28.4 per cent; and in twenty years from sixty-six per cent to 28.4 per cent<sup>30</sup>. Scudder's mortality rate from hospitals all over the world based on 2150 cases is thirty-five per cent<sup>25</sup>.

The etiology of intestinal obstruction, its pathology and treatment, is well known by most people, but for purposes of therapy the following classification developed by Wangenstein is quite simple and useful.

In a consideration of the factors and causes of the high mortality rate in obstruction, the following seem to be important:

1. Dehydration

2. Hypochloremia

3. Toxemia

4. Early destruction of vascular supply of the intestinal wall

5. Distention of the intestine

6. Operative treatment

Dehydration has always been known as a prominent effect, especially of late obstructions. It is caused by low fluid intake and prolonged vomiting. It is frequently present to an alarming degree and necessitates the administration of large quantities of parenteral fluids. The amount to be given is estimated by its effect. Wangenstein says that the most reliable index is the urinary output which should be at least 800 cc. per twenty-four hours. The amount necessary to produce this during the first day may be as high as eight liters. The optimal<sup>15</sup> amount for maintenance is usually agreed to be in the neighborhood of 3500 cc. daily.

Hypochloremia is another prominent effect of prolonged vomiting. The blood chlorides are sometimes seen as low as 250 mg. per 100 cc. of blood.

Pathology	Etiology	Treatment
Simple	A. Mechanical Obstruction	Operative with preceding suction
	I. Narrowing of lumen	
	1. Stricture of wall	
	a. Congenital	
	1. Atresia	
	2. Imperforate anus	
	b. Acquired	
	1. Inflammatory	
	2. Traumatic	
	3. Vascular	
	4. Neoplastic	
	2. Obturation	
	3. Compression from without, (usually pelvis.)	
Simple or Strangulation	II. Adhesive bands	Suction. Operate for persistent obstruction or strangulation
	1. Congenital	
	2. Inflammatory	
	3. Traumatic	
	4. Neoplastic	
Strangulation	III. Hernia	Early operation
	1. External	
	2. Internal	
	IV. Volvulus	
	V. Intussusception	
Simple	B. Nervous	Suction
	I. Inhibition ileus, (paralytic or adynamic.)	
	II. Spastic ileus, (dynamic.)	
Strangulation	C. Vascular	Early operation
	I. Thrombus or Embolus	
	II. Severance or injury of mesenteric vessels, (operative or blunt trauma.)	



Hayden and Orr state that the administration of concentrated sodium chloride gives a remarkable clinical improvement even though the patient is still dehydrated. The amount of chlorides lost by vomiting is readily understood, as according to Mathews<sup>17</sup>, the amount of chlorides secreted in the stomach of a dog in two and one-half hours following feeding is equivalent to one half the total chlorides in the blood stream which is about one fourth the total amount in the body. Although the concentration of chlorides in gastric juice of man is about one half of that in dogs, it is readily seen that it is enough to produce a marked drop in the total chloride reserve.

The effect of combined hypochloremia and dehydration is a drastic reduction in urine output in an effort to compensate for the loss of water and chlorides. This explains the high nonprotein nitrogen, frequently over 60 mg. per 100 cc. blood, found in cases of intestinal obstruction. They are usually satisfactorily relieved by adequate amounts of saline parenterally. Another prominent feature is the alkalosis from loss of chlorides, the carbon dioxide combining power often going over eighty volume per cent, and likewise benefited by parenteral saline solution.

The origin of the "toxemia" of intestinal obstruction is not well understood. Whipple and various English authors state that the mucosa of the intestine when deprived of its blood supply breaks down into proteoses and other histamine-like compounds that are quite toxic. They have produced a marked lowering of blood pressure in the intact animal by injection of material from the lumen and around the field of strangulated loop of intestine<sup>3,16</sup>.

Recently Scudder and his associates<sup>25,26,27</sup> have made a study of the variations of the level of potassium in the blood, intestinal lumen and peritoneum of patients with intestinal obstruction. They have found an elevation of about fifty per cent of the normal potassium, (20 mg. per 100 cc. blood), in experimental obstruction, high intestinal fistula, and in clinical cases of intestinal obstruction. The action of the pathological elevation of the potassium ion level is somewhat similar to the condition in clinical obstruction, cholera and loss of the adrenal cortex. The source of potassium is supposedly the cellular elements of the blood. Its release is effected by abnormally low chloride levels in the plasma. They find experimentally similar electrocardiogram effects in potassium poisoning and intestinal obstruction.

The theory of absorption of products of bacterial decomposition of intestinal contents has been almost universally abandoned at present.

Early destruction of the vascular supply of a section of the wall of the intestine is in itself very hazardous to the life of the patient, but ordinarily strangulation is so well attended by the localizing signs and symptoms that the patients get early surgery, and the mortality of this group of patients is much lower than any other. Destruction of a large branch of the blood supply as in a massive mesenteric thrombosis or embolus still carries a mortality rate of about ninety per cent.

Distention has long been considered a very prominent phase of intestinal obstruction and a very dangerous one. Early attempts at decompression were all operative and as a result the mortality rate was about sixty per cent to eighty per cent on these. No satisfactory method was found until the advent of continuous gastric suction and continuous duodenal suction. These in many cases serve fairly satisfactorily in decompression of the upper small intestine and at times the lower small intestine with complete relief of obstruction, but there still remains a large group of patients who even after vomiting and pain have been stopped show rather marked distention of the lower abdomen.

Distention of the intestine, particularly in the upper portion, has a tendency to block the venous supply, and then the arterial supply as their respective pressures are equalized by the pressure inside the lumen.<sup>15</sup> Under these conditions, particularly with venous return blocked, gas is secreted directly from the blood to the lumen. Liquid secretion is increased and absorption is much slowed so that a vicious circle is formed. Of course early in the obstruction the main portion of the intestinal contents consists of swallowed air, food and liquids, plus the gastric, biliary and intestinal secretions. When absorption is hindered, another source of gas is found in the combining of acid from the stomach with alkaline intestinal juices, amounting daily to six liters in the intact human.

Gas, according to McIvor<sup>18</sup>, Kantor and Marks<sup>15</sup>, in the intestinal lumen will undergo exchange with the gases in the blood through the intact mucosa in accordance with the ordinary laws of diffusion.

They find that in order of their disappearance from the intact lumen they are carbon, dioxide, hydrogen sulphide, oxygen, hydrogen, methane, and nitrogen, the latter having a very low constant on account of low solubility and high partial pressure in the body fluids. They also find that this absorption of gas is a reversible process, and by cutting off the venous return to the point of engorgement the gas flows into the intact intestinal lumen and fills it. Venous return being cut off by distention alone may account for the rapid distention at times even

though the oral intake is little or nothing. Ordinarily nitrogen is the predominating gas found in the distended intestine. If the intestine is inflated with one of the soluble gases for a time and then examined, it will be found that it is replaced largely by nitrogen on account of its four-fifths of an atmosphere partial pressure in the blood stream and low solubility. Ordinarily large quantities of intestinal gases are eliminated through the blood stream and lungs by this mechanism. Even in obstruction considerable quantities of fluids and gases must be absorbed before the loss of function by rise of intra-intestinal pressure and stretching of the walls.

The problem of deflating the intestinal tract without enterostomy is important because of the extreme danger of opening the intestine in the presence of distention. The feasibility of gastric and duodenal suction is well known, but in many cases this is incomplete and somewhat slow at best.

Intestinal intubation was first successfully attempted in the unobstructed patient by Scheltema in 1908. This was done by passage of a No. 11 F plain rubber tube. It required several days and frequently failed altogether.

Einhorn in 1919 used a No. 8 F tube passing it to the ileocolic junction for use in medication in colitis. This required six to eight days for passage. The tube was in three foot segments strung over a silk thread. The segments had a tendency to come off and be passed by rectum<sup>9</sup>.

The first practical method was developed by Miller and Abbott in 1934<sup>19</sup>. This tube had two separate lumens, one of which was connected to a rubber balloon at the distal end of the tube. It was No. 18 F in size and the lumens were of equal size. One lumen opened proximal to the balloon for the collection of intestinal secretions.

Lately Abbott and Johnston<sup>1</sup> have brought out another tube, No. 16 F with one small and one large lumen. This is equipped with a balloon just proximal to the end, inflated by the small lumen. The large lumen ends in a small metal bucket. The total length of the tube is about eleven feet.

They reported that this tube was used in sixteen cases of obstruction. In three cases they failed to pass the pylorus and the patients died. Nine cases were decompressed and resumed normal intestinal function. Four were operated upon successfully following decompression.

The tube moves about two feet an hour in the normal person or one foot an hour in the case of intestinal obstruction. When past the pylorus, the balloon was inflated, and the suction applied to the large lumen, thus deflating that area of intestine and regaining motility. Progress continued until the

bucket lay just proximal to the obstruction.

The advantages of the tube are:

1. May be used on late obstructions, some type of suction is always used.
2. Frequently the obstruction subsides, and the patient is not operated upon.
3. If the obstruction does not relax, the tube may be left down an indefinite time, and the patient absorbs fluids by mouth from the proximal gut as in enterostomy.
4. If the pylorus is not passed for any reason, the gastric suction is at least as effective as that routinely used, so that the patient is not deprived of ordinary treatment.
5. The tube may be left in place during operation, thus insuring against post-operative distention and perforation of damaged or weak walls.

Early operation is the treatment of choice, and frequently it has to be done at some time during the course of treatment. In general the earlier the operation the better the patient's chances are as long as the obstruction is mechanical or vascular in origin. If seen early, the obstruction is corrected as simply as possible. In case of severe damage to tissue, it is excised if non-viable.

However, a great number of cases of obstruction are seen late in their course or immediately following an operation. When seen at this stage, they should be put in the best possible condition before operation is attempted. This usually consists of, (1) Parenteral fluids and sodium chloride; (2) Decompression of distended intestine; (3) Morphine; and (4) Heat to abdomen. Unless these are done fairly effectively, the hazard of surgery is prohibitive.

When the patient is in the best possible condition, operation is attempted. In general when operating at this time, the less surgery attempted the lower the mortality rate. Wangenstein has made it a practice when doing this type of operation on simple obstruction to do an enterostomy at the lowest possible point and then send the patient back to bed. He says that frequently simple obstructions relent after enterostomy and require no further surgery. If further surgery is necessary, the patient is in much better condition following an interval of convalescence. Of course if gangrenous areas are found, a resection or exteriorization should be done. One distinct advantage of enterostomy is that the proximal intestine can be utilized as a nutritive tube.

It has been a practice in the past to open the intestine and gently strip it throughout its length, thus completely evacuating it. Needless to say, at present this is not recognized as good surgery. In



intact dogs, shock may easily be produced by this same gentle manipulation.

Most patients dying after surgery for intestinal obstruction are victims of: (1) Late recognition; (2) Operation before condition is good enough to stand surgery; and (3) The attempt of too much surgery in the presence of a distended gut. No doubt this condition could be improved if an easy, effective and non-surgical method of low intestinal decompression was found, so that the patient could wait safely until the condition was improved.

An accurate estimate of the condition of the patient and his chances of survival of surgery is difficult at best. Scudder, in a statistical survey of 2100 operated cases of intestinal obstruction, found that the following index will give an approximate evaluation of the mortality rate<sup>25</sup>.

T, Temperature factor. Assign a value of one and add one for each degree above or below 98.6 degrees.

P, Pulse factor. Assign a value of one and add one for each ten per minute over sixty-eight.

R, Respiration factor. Assign a value of one and add one for each rise of five respirations per minute over twenty.

Now multiply  $T \times P \times R$ . Example: If temperature is 100.6 degrees, T factor  $1 + 2 = 3$ . If pulse is 118, P factor  $1 + 5 = 6$ . If respiration is 25, R factor  $1 + 1 = 2$ .  $3 \times 6 \times 2 = 36$ , and the mortality rate of patients operated in this condition is about thirty-six per cent.

Recently the Miller-Abbott tube has been used on three patients in Wichita. A brief account of the results is shown below.

#### CASE NO. I

The patient was a white female, single, seventeen years of age. She was admitted to the hospital on June 3, 1938.

Family history was negative.

Past history. The patient had a laparotomy fourteen months before admission; the appendix, one tube and one ovary were removed. At the age of ten years, the patient had had rheumatic fever. When she was admitted to the hospital, she complained of nausea, vomiting, generalized abdominal pain and distention. The onset had occurred five days before admission with sudden cramping gas-like pains in mid-abdomen. She was seen by a physician at that time and given a hypodermic and diagnosis of intestinal colic. That afternoon she rode 250 miles home in a car, vomiting once during the afternoon. Since that time, she has continued to vomit everything taken by mouth including medication given by the physician on the second and third days, (to

settle her stomach). She also had several hypodermics for pain. She had no bowel movements after the onset of pain but passed a little gas. Her LMP was three weeks before admission.

Physical Examination. On admission, T 100 degrees, P 120, R 22. The patient apparently was quite ill and complaining of pain, continued nausea and vomiting. The skin, lips and tongue were dry. The chest had no rales or dullness. The heart rate was 120 and regular. The second pulmonic sound was accentuated, and soft presystolic and systolic murmurs were heard over the mitral area transmitted into the left axilla. There was no apparent enlargement. The abdomen showed signs of distention throughout with slight rigidity and slight generalized tenderness. There was tympanitic percussion note, and no peristaltic sounds heard. There was a right rectus surgical scar.

The urine examination showed sp. gr. 1.020, alkaline reaction, 1 + albumen, no sugar. The blood contained 9,000 white cells and had a hemoglobin of eighty-nine per cent; and on the eighth day it was seventy-eight per cent.

Clinical Course. Following gastric suction and parenteral fluids for two days, the temperature climbed to 102.4 degrees and the pulse went to 135. At that time the Miller-Abbott tube was passed, without the balloon, going through the duodenum with some difficulty. The next day, twelve hours later, the tube was found to be four feet down the jejunum, and the patient started having foul smelling liquid stools and gas. The distention rapidly deflated from this time on and the patient's condition markedly improved. However, when the tube was clamped off six days later, the patient stopped passing stools and had abdominal pain. On the tenth hospital day the patient was taken to surgery. A mechanical obstruction, partial, was discovered and freed. A small ovarian cyst was also removed. The Miller-Abbott tube was found to be just above the point of obstruction in the ileum and was left there during the operation and following. During the operation the patient's pulse rose to 160 at one time. Her condition was good on leaving the operating room.

The post-operative course was entirely uneventful and was notable for the lack of distention or vomiting. Bowel movements commenced on the third post-operative day, and the patient was always able to take fluids by mouth. Stools were passed two to three times a day and were liquid in nature; the patient having a moderate diarrhea of about six stools a day from the fourth post-operative day to the eighth post-operative day. The Miller-Abbott tube was removed on the third post-operative day at

which time the patient's temperature, pulse and respiration were normal, and there was no distention. The patient's recovery was entirely uneventful from this time on, and she was dismissed on the sixteenth post-operative day.

After the tube was inserted, the patient was able to drink at will without causing nausea or distress. Much gas was noticed coming through the tube during the progress down the small intestine. Frequent irrigation kept the tube open. If the tube became plugged, immediate distress was noted. After decompression had released the obstruction, the small bowel seemed hypermotile, and absorption was limited so that a considerable amount of liquid was removed through the tube, about one-half to two-thirds of the intake by mouth. This became less apparently because of the increased absorption from the intestine. Moderate difficulty was encountered getting the tube past the duodenum without the balloon attached, and progress down the ileum was rather slow, taking about one and one-half days to reach the area just above the obstruction.

#### CASE NO. II

The patient was a white female, single, fourteen years of age. She was admitted to the hospital on June 5, 1938.

Family History. Both her father and mother are alive and well. One brother died a year and a half ago following an appendectomy. The appendix was not acutely inflamed, and the patient lived for two weeks following the operation.

Past History. The patient had had the usual childhood diseases and had had no previous attacks of abdominal pain.

H. P. I. Three days ago, the patient began having cramping epigastric pain, associated with nausea and occasional vomiting. Yesterday the patient was quite comfortable. Last night pain was noticed again, this time a little lower and mostly on the right side. The patient ordinarily has a daily bowel movement but has been constipated for the last three days.

Physical Examination. The examination disclosed a well developed, well nourished, white, female child, not acutely ill. The examination was negative except for moderate localized tenderness in the lower right quadrant. There was no distention and no rigidity. Temperature was 99 degrees, pulse 76, and respiration 20. On admission the diagnosis of acute appendicitis was made, and the patient was subjected to a laparotomy. An acutely inflamed appendix was removed. The caecum was found to be very motile and located a little to the left of the mid-line.

On admission the patient's white blood count was 13,000, eighty-two per cent being polymorphonuclear cells and eighteen per cent lymphocytes. The hemoglobin was ninety-three per cent.

Clinical Course. Following the operation, the patient ran a fever of between 100 to 102 degrees with pulse rate of 100. She complained continually of abdominal pain and began to vomit on the sixth post-operative day. At this time a Levine tube was inserted, but no fluids seemed to pass the stomach. The patient felt a little better but continued to have right sided pain. Her condition remained about the same until the ninth post-operative day, during which time the patient passed only small amounts of stools and flatus. The next day the pain became much more pronounced, and the Levine drainage was a thick yellow fluid smelling like feces. A blood transfusion was given on the eleventh post-operative day, and fluid intake regulated by intravenous and subcutaneous fluids. Her temperature rose to 103 degrees and pulse to 124. On the twelfth post-operative day, the Miller-Abbott tube was inserted with the balloon attached and inflated. The patient was lying on her left side. The tube was promptly passed through the pylorus and in about twelve to fourteen hours had reached six feet past the pylorus. The patient's temperature dropped to ninety-nine degrees, and she passed much gas and many stools by rectum in sixteen hours. The patient was put on a liquid diet and was quite comfortable until the seventeenth post-operative day at which time she had a recurrence of pain, and her temperature jumped to 104 degrees. The Miller-Abbott tube was found to be obstructed by the very slack balloon. After correction, the patient was again comfortable with normal temperature until one week later when the same process was repeated. The patient had another attack of pain and distention one month after operation; and following relief by the tube, recovered rapidly. The tube was removed on the thirty-fourth post-operative day, five days before dismissal, having been in a total of twenty-two days.

Treatment consisted of intravenous saline and glucose, three blood transfusions and intestinal decompression.

X-ray pictures before decompression showed much gas in the small intestine. A barium enema given following decompression showed the colon to be entirely on the left side of the abdomen. The tube, except in one picture, was always entirely on the right side of the abdomen.

The tube could not be passed without the balloon attached as was discovered after wasting twelve hours in the attempt. The main difficulty with the tube in this case was that the balloon became



stretched and hung down around the bucket so that it effectually blocked suction although fluid could always be passed down the tube.

### CASE NO. III

The patient was a white female, married, in early middle life. She was admitted to the hospital on July 3, 1938. The diagnosis was full term pregnancy.

Physical Examination. The examination was negative except for a scar in the lower right quadrant. (Date of appendectomy unknown.)

Following normal delivery, the patient passed an uneventful three days. On the third, following a routine enema, the patient complained of very severe cramping abdominal pain which was generalized. The abdomen became quite distended; and four ampoules of pitressin, repeated enemas, colon tube and Levine tube gave no relief from distention. The Miller-Abbott tube was inserted late in the evening of the fourth day. It passed the pylorus with ease and was inserted to two or three feet down the ileum. About 4 a. m. the next day, twelve hours after insertion, the patient began passing much flatus and the distention left rapidly. The tube was removed in two days, and the patient has had no further symptoms.

The tube passed without the balloon with no difficulty.

In these cases it was found that the main difficulties were: (1) Getting the tube past the pylorus; (2) Feeding the tube at the same rate that it was passed by the intestine; (3) Keeping the suction free and open; (4) Keeping the rubber balloon from stretching over the metal bucket; and (5) Introduction of the tube and balloon through the nose.

Passage of the tube is usually somewhat difficult, especially in the distended patient with weak peristalsis or reverse peristalsis. In one case it was passed without the balloon by placing the patient on the right side after entering the stomach. The next case did not put it through in this manner, and so the balloon was attached and inflated in the stomach with the patient on the left side, after which it passed promptly. If the tube is not passed, persistent efforts should be made as it is difficult anyway if the operator is not accustomed to its use. Frequent checking by fluoroscopy is advantageous when the location of the end of the tube is in doubt. One frequent reason for the refusal of the tube to pass is the coiling of the tube in the stomach, and much time may be wasted. As yet no other positive method of knowing when the tube has entered the duodenum has been found.

If the tube is passed too slowly no particular harm

is done except that the results are somewhat delayed. Delay in the progress of the tube is usually due to neglect on the part of the attendant to constantly but slowly feed it through the nose at the rate of about one foot an hour. At best it requires close personal supervision.

The tube is rather small and the holes in the bucket are small so that frequent irrigations of the tube with small amounts of saline is the best assurance of keeping it open. This was done usually every one-fourth or one-half hours using ten cc. of saline.

After the tube has been down for several days with the balloon inflated, the constant tugging of peristalsis and pressure within the balloon tend to stretch the balloon so that it falls over the bucket thus making a valve, so that fluid can go down the tube but not up. In order to avoid this, the balloon should be deflated as soon as possible after passage and should be of the best quality of rubber.

Introduction of the tube through the nose was somewhat of a problem at first as some peoples' noses have narrow orifices. When this is the case, it is better to remove the balloon and bucket, and lubricate the tube thoroughly after which any but the very narrowest noses can be negotiated. The tube is then pulled out of the pharynx through the mouth and re-assembled.

Removal of the tube was in no case difficult with gentle traction, although it usually took ten to fifteen minutes.

Indications and contraindications. The tube is indicated in any marked distention of the intestinal tract, paralytic or mechanical obstruction, when it is felt that there is no strangulation of the intestine. It may also be used in early obstructions, as the relief of distention, edema and kinking of the gut frequently cause simple obstructions due to adhesions, to relax. This is particularly true when there are other conditions that would make operation hazardous, post-operative post-partum or debilitated patients.

The question has been raised as to whether the efforts to intubate the patient would not waste valuable time allowing necrosis of strangulated tissue or further distention in case it was impossible to get past the pylorus. Strangulation gives localizing signs and symptoms so that these cases are usually operated before generalized intestinal distention is a factor. In case the attempt to get through the pylorus is unsuccessful, the patient has had constant gastric suction which is accepted routine treatment at present.

## SUMMARY

1. Various phases of intestinal obstruction are discussed.
2. The Miller-Abbott tube is discussed.
3. Three cases in which the tube has been used are presented in which it seems that the tube was probably the most important factor in the successful outcome.

1. Abbott, W. O. and Johnston, C. G.: Non Surgical Method of Treating, Localizing and Diagnosing the Nature of Obstructive Lesion. Surgery, Gynecology and Obstetrics, Vol. 66, No. 4, pp. 691-697, April, 1938.

2. Abbott, W. O. and Miller, T. G.: Intubation Studies of the Human Small Intestine. Journal of the American Medical Association, Vol. 106, No. 1, pp. 16-18, January 4, 1936.

3. Aird, I. and Henderson, W. K.: Intestinal Strangulation: The Histamine Content of the Peritoneal Transudate Form Strangulated Intestinal Loops. The British Journal of Surgery, Vol. XXIV, No. 96, pp. 773-779, April, 1937.

4. Baumeister, C., Hargens, C. W., and Morsman, C. F.: Obstruction Due to Appendices Epiploicae. Annals of Surgery, Vol. 107, No. 1, pp. 153-154, January, 1938.

5. Cutler, E. C. and Pijoan, M.: Certain Chemical Factors In Experimental High Intestinal Obstruction. Surgery, Gynecology and Obstetrics, Vol. 64, No. 5, pp. 892-894, May, 1937.

6. David, V. C.: Chronic Intestinal Obstruction Due to Lesions of the Large Bowel. Surgery, Gynecology and Obstetrics, Vol. 64, No. 2A, pp. 281-286, February, 1937.

7. Dixon, Claud F. and Deuterman, Joel L.: Acute Intestinal Obstruction. Surgical Clinics of North America, Vol. 17, p. 983, August, 1937.

8. Donaldson, J. K.: Intestinal Obstruction. Archives of Surgery, Vol. 35, p. 155, July, 1937.

9. Einhorn, Max: An Intestinal Tube. New York Medical Journal, Vol. 110, pp. 456-458, 1919.

10. Estes Jr., W. L.: Enteritis of the Obstructed Loop Following Enterostomy For Intestinal Obstruction. Annals of Surgery, Vol. 105, No. 5, pp. 871-877, May, 1937.

11. Hayden, Russel L.: Treatment of the Toxemia of Obstruction of the Gastrointestinal Tract. Surgical Clinics of North America, Vol. 17, p. 1399, October, 1937.

12. Hibbard, J. S.: Gaseous Distention Associated with Mechanical Obstruction of the Intestine. Archives of Surgery, Vol. 33, pp. 146-167, July, 1936.

13. Hibbard, J. S. and Kremen, A. J.: Effect of the Volatile Base in Fluid Intestinal Contents on Dogs With Low Intestinal Obstruction. Surgery, Vol. 3, No. 3, pp. 325-332, March, 1938.

14. Hibbard, J. S. and Wangenstein, O. H.: Character of Gaseous Distention In Mechanical Obstruction of Small Intestine. Proc. Soc. Exp. Biol. and Med., Vol. 31, p. 1063, 1934.

15. Kantor, J. L. and Marks, J. A.: A Study of Intestinal Flautulence. Annals of Internal Medicine, Vol. 3, No. 5, pp. 403-421, November, 1929.

16. Knight, G. C.: Intestinal Strangulation. The British Journal of Surgery, Vol. XXV, No. 97, pp. 209-226, July, 1937.

17. Mathews, A. P.: Physiological Chemistry, 5th ed., p. 358, Wm. Wood and Co., 1930.

18. McIver, M. A., Redfield, A. C., and Benedict, E. B.: Gaseous Exchange Between the Blood and Lumen of Intestine. American Journal of Physiology, Vol. 76, p. 92, 1926 (March).

19. Miller, T. G. and Abbott, W. O.: Intestinal Intubation: A Practical Technique. American Journal of the Medical Sciences, Vol. 187, No. 5, pp. 595-598, May, 1934.

20. Morton, J. J.: Factors Determining the Selection of Operation in Obstruction of the Small Intestine. Surgery, Vol. 1, p. 848, June, 1937.

21. Orr, T. G.: Sdema In Surgical Patients. Surgery, Gynecology and Obstetrics, Vol. 63, p. 527, 1936.

22. Orr, T. G.: Therapeutic Management of Intestinal Obstruction. Surgery, Vol. 1, p. 838, June, 1937.

23. Oxford System of Medicine.

24. Todya, T.: Acute Intestinal Obstruction. Annals of Surgery, Vol. 107, No. 3, pp. 340-349, March, 1938.

25. Scudder, J. Zwemer, R. L., and Whipple, A. O.: Acute Intestinal Obstruction. Annals of Surgery, Vol. 107, No. 2, pp. 161-191, February, 1938.

26. Scudder, J. and Zwemer, R.: The Effect of Complete Intestinal Fistula on Blood Potassium. Surgery, Vol. 2, p. 519, October, 1937.

27. Scudder, J., Zwemer, R., and Truszkowski: Potassium in Acute Intestinal Obstruction. Surgery, Vol. 1, p. 74, 1937.

28. Stecher, W. R.: Roentgenologic Aid in the "Acute Abdomen." Radiology, Vol. 26, No. 6, pp. 729-740, June, 1936.

29. Swenson, P. C. and Hibbard, J. S.: Roentgenographic Manifestations of Intestinal Obstruction. Archives of Surgery, Vol. 25, pp. 578-600, September, 1932.

30. Van Beuren Jr., F. T. and Smith, B. C.: Mortality in Acute Ileus. Annals of Surgery, Vol. 106, No. 4, pp. 752-755, October, 1937.

31. Wangenstein, O. H.: Exploration of the Criteria Upon Which the Early Diagnosis of Intestinal Obstruction May be Made With Special Consideration of the Value of X-ray Evidence. Radiology, Vol. 17, p. 44, July, 1931.

32. Wangenstein, O. H.: Rationalizing Treatment In Acute Intestinal Obstructions. Surgery, Gynecology and Obstetrics, Vol. 64, No. 2A, pp. 373-280, February, 1937.

33. Wangenstein, O. H. and Paine, J. R.: Treatment of Acute Intestinal Obstruction by Suction With the Duodenal Tube. Journal of the American Medical Association, Vol. 101, No. 20, pp. 1532-1539, November 11, 1933.

34. Wright, S.: Applied Physiology. Humphrey Milford, Oxford University Press, 1932.

## CASE REPORT OF ACUTE UREMIA

Ralph S. Casford, M. D.

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Eudora S., aged twelve years, ten days prior to her present illness had a mild case of scarlet fever. Four or five days previous to the onset of convulsions her parents noticed that she was more or less drowsy, with occasional headaches and was unable to do her usual work. This continued until the afternoon of the tenth day when she refused to eat her dinner, felt drowsy so was put to bed and shortly thereafter had a convulsion which lasted about three minutes with complete loss of consciousness.

At the time the patient was seen she was semi-conscious and extremely irritable. Reflexes were all hyper-active. Her pupils were widely dilated, vision blurred, and breathing stertorous, B. P. 175/120, pulse rapid, full and bounding. A catheterized specimen revealed ten cc of a highly colored urine, sp. gravity 1030, albumin 3 plus, sugar-negative, and microscopic examination showed a field with many red blood cells. The patient was given morphine grains 1/6 and atropine-sulphate grains 1/150 stat, ethyl chloride inhalation, 150 cc of blood was removed by venous puncture from the right median basilic vein. Warm moist packs were applied to the entire body and a one per cent solution of magnesium sulphate was given intravenously. Later gastric lavage was given and one and one-half ounces of magnesium sulphate given through the tube. The convulsions recurred every fifteen or twenty minutes until 12 p. m. when they became shorter, less severe and farther apart. The last seizure occurred at 5 p. m. the next day and lasted a few seconds. The blood pressure returned to 125/100 in two or three days. The urine continued to show an abnormal number of red cells for a number of weeks. The patient was cared for in the home and no blood chemistry was done. However the P. S. P. was normal on several occasions later.

This case is reported to illustrate a severe kidney infection following a mild case of scarlet fever.



## SCARLET FEVER IMMUNIZATION

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There has been for several years a controversy as to the efficacy of scarlet fever immunization. At the present time it is not used by most clinicians. The reason being that in the past there have been many severe reactions from the injections. Some few years ago the immunizations were given in three injections at weekly intervals but in recent years they are given in five injections. Even with the five injections severe reactions occur. It has been almost impossible to get mothers to return after the second or third injection. Furthermore the scarlet fever which we have been seeing in the past five years has, as a whole, been very mild with no complications and a short course. The first injection of the serum frequently would be more severe than having the disease. Due to the mildness of the disease, and the severe reactions accompanying the injections, and also the uncertainty of the immunizing qualities, most doctors have abandoned its use.

It has been my good fortune for the past six years to have charge of the medical supervision of some 125 to 150 children at an orphans home. In an institution of this nature it is advisable to prevent any type of an epidemic, consequently all children on admission receive protection against smallpox, diphtheria, whooping cough, typhoid fever, and scarlet fever. It has been for the past four years that all children have received scarlet fever immunization. During this time there have been but two cases of scarlet fever which occurred in 1937. Scarlet fever was prevalent in all sections of the city. In the school which these children attended there were many cases of scarlet fever, but we felt pleased that our orphans home was free of cases. After a month of the epidemic, it occurred to me to analyze the cases which we were diagnosing as influenza and sore throat. Upon close scrutiny it was definitely decided that these children were suffering from scarlet fever but were not being diagnosed as such because there was no rash. The rash as you know is the sole means of a positive diagnosis. After the epidemic had subsided we were able to analyze the cases of so-called sore throat. There were twenty-one cases in all. Of this number two cases had mastoids, five cases had glandular enlargement and four cases had otitis media purulenta. Looking back at these children it is my firm conviction that these children had scarlet fever but with no definite means of diagnosis without a rash. The unfortunate thing about these

sick children was the fact that they were not quarantined and besides they were sent back to school too soon, thus being a means of spread of the disease to other children.

Having read the several articles on the inadvisability of giving the scarlet fever serum, and due to my personal experience during this past epidemic, I am firmly convinced that to immunize children against scarlet fever is not a practical procedure nor is it justifiable, when all that is accomplished is to immunize them against the rash and not the toxic symptoms which occur from the infection. As scarlet fever has been a rather mild disease in the majority of cases in the past few years, and due to the fact that the antitoxin is specific in the majority of severe cases of scarlet fever, we are of the opinion that to obscure our means of diagnosis, which is the rash, by giving the scarlet fever serum, is to do more real harm than it would be if the child had the disease.

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Iron Used For Many Anemias—Use of iron in certain secondary anemias is nearly as spectacular as liver extract in pernicious anemia, W. M. Fowler, M.D., and Adelaide P. Barer, Ph.D., Iowa City, state in *The Journal of the American Medical Association* for Jan. 14.

Insufficient iron for hemoglobin formation will lead to anemia of the hypochromic type, which is characterized by a reduction in the coloring matter of the blood. This is frequently referred to as iron deficiency anemia. The most common form results from chronic hemorrhage. It occurs whenever the prolonged loss of iron, in the form of hemoglobin, is more rapid than its replenishment from the dietary intake, and it is encountered most frequently in cases of peptic ulcer, hemorrhoids and profuse menstruation.

It is in these anemias that adequate iron medication is particularly effective. In order that all patients may obtain a satisfactory response to iron, the amount given routinely must be considerably more than the average requirement.

The first effect of iron therapy is an increase in the number of immature red blood cells. This occurs before the hemoglobin content is raised and is used as a measuring stick of whether adequate treatment—iron—is being given. However, the best criterion of the effectiveness of iron is the hemoglobin response.

The form in which iron is given is of minor importance, and each physician has a favorite preparation. The preparation of iron and ammonium citrates is one of the most popular vehicles and is given in capsules, syrup or water. When it is given in solution the teeth must be protected against discoloration. This is done by using a drinking tube.

Innumerable preparations, with and without added vitamins, of liver, iron and other metals are marketed, but none of these seem to be better than the common simple forms.

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The man who loves his work always takes a busman's holiday, for there is never time enough to do everything he wants to do about his job while he is on it.—Hygeia.

## PRESIDENT'S PAGE

To the Members of The Kansas Medical Society:

The standards of medicine in Kansas are facing the greatest crisis in its history.

Many years ago Kansas physicians and surgeons had difficulty in establishing a Board of Health, which is now obvious to all that it was for the welfare of all our citizens and not for any selfish interest of the medical profession.

The public has been protected through the efforts of medicine, by education and law, in giving good sanitation, pure water, clean and wholesome milk and food, immunization against many communicable diseases and in the protection of the public therefrom, and even further protected by raising the standards of medical education and practice, so that medical men might be even more efficient in recognizing disease and its problems and be able to cope with them with a knowledge and understanding.

Every one admits that no scientific contributions for the protection of the health of humanity has come from any other source than the medical profession and its co-workers.

But now it seems the medical profession has been derelict in keeping these facts before the public. We take too many things for granted until we learn that through pressure and misinformation there are many of our good citizens, who would have our Legislature pass laws to legalize men and women to practice medicine and surgery with little or no training.

It is high time that every medical man in Kansas get on his toes and lend every effort to stop this proposal of retrogression.

Now is the time to act, next month may be too late! May we continue to hold our standards high, and our code of ethics clean which has up to now stood out as a model, for business and professional men.

N. E. Melencamp, M.D. .  
President



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## EDITORIAL

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### OSTEOPATHIC PROPOSAL

One of the most far reaching and amazing proposals ever made in the Kansas Legislature on the subject of public health and medicine and surgery, is to be found in HB 147 introduced by Representative D. B. Fordyce, an osteopath of Labette County and Representative Caldwell Davis, Jr., of Bourbon County and in SB 171 introduced by Senator C. A. Richard of Nemaha County and Senator C. N. Miller of Ottawa County.

HB 147 which is almost identical with SB 171 reads as follows:

"An Act concerning the practice of osteopathy, providing for the educational requirements, examination and licensing of osteopathic physicians and surgeons, amending section 65-1201, General Statutes of 1935, and repealing said original section. Be it enacted by the Legislature of the State of Kansas:

Section 1. Section 65-1201 of the General Statutes of 1935 is hereby amended to read as follows: Sec. 65-1201. Any person not now a licensed osteopathic physician and surgeon under the laws of this state, before engaging in the practice of osteopathy in this state, shall make application to the board of osteopathic examination and registration, on a form prescribed by the board, for a certificate to practice osteopathy, giving:

1. His name and age, which shall not be less than twenty-one years, and residence:

2. Evidence of having complied with pre-professional educational requirements herein specified;

3. The name of the school or college of osteopathy from which he graduated, which shall have been in good repute as such, at the time of the issuing of his diploma, as determined by the board;

4. The date of his diploma, and evidence that such diploma was granted on personal attendance and completion of the course of study herein prescribed;

5. Evidence that the applicant is of good moral character, and such other information as the board may require;

6. Such application shall be accompanied by a fee of twenty-five dollars.

Sec. 2. An applicant for examination shall present evidence of a diploma of graduation from a high school, academy, state normal school, college or university, or a certificate of examination for admission to the freshman class of a reputable college, approved by the board, and present evidence of having completed at least two years of pre-professional education of a college grade in a college approved by the board before taking up the study of osteopathy, and shall have graduated, after personal attendance, from an osteopathic school or college of good repute wherein the course of study shall consist of at least four years of thirty-six weeks each, in each separate year, and shall have completed one year internship following graduation in a hospital approved by the board.

Sec. 3. The board shall subject all applicants to a practical examination, as to their qualifications for the practice of osteopathy, in writing, in the subjects of:

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| 1. Anatomy                                | 7. Diagnosis                              |
| 2. Physiology                             | 8. Obstetrics and Gynecology              |
| 3. Bacteriology                           | 9. Operative Surgery                      |
| 4. Hygiene                                | 10. Physiotherapy                         |
| 5. Physiological Chemistry and Toxicology | 11. Drug Therapy                          |
| 6. Pathology                              | 12. Principles and Practice of Osteopathy |

and such other subjects as the board may require. This may be supplemented by other practical examinations such as the board may by rule determine.

Sec. 4. If the examination is passed in a manner satisfactory to the board, then the board shall issue to said applicant a certificate granting him the right to practice osteopathy in all its branches, which includes operative surgery with instruments, physiotherapy and the use of drugs, as taught and practiced in the legally incorporated colleges of osteopathy of good repute, and the right to register under the laws of the United States of America governing narcotics. All grades made on examination shall be permanently recorded and examination papers kept by the board for a period of five years. Any person failing to pass the examination may be reexamined at any regular meeting of the board within one year from the time of such failure, without additional fee, pro-

vided the board is given twenty days notice in writing.

Sec. 5. The board may, in its discretion, dispense with an examination, and issue a certificate to an osteopathic physician and surgeon who presents a legal and valid certificate or license authorizing the practice of osteopathy, issued after examination, by the legally constituted board of any state, territory, District of Columbia, province or foreign country, or an osteopathic physician and surgeon who presents a certificate issued by the national board of examiners for osteopathic physicians and surgeons, granted only to applicants of substantially the same grade and educational qualifications as those required in this state, at the time such certificate or license was issued, who makes application on a form prescribed by the board, and accompanied by a fee of not less than that of the state, territory, District of Columbia, province or foreign country, from which applicant seeks reciprocity, which shall not be less than fifty dollars.

Sec. 6. The secretary of the board may grant a temporary permit to practice osteopathy, valid only until the next regular meeting of the board, or until the board can conveniently meet, to such applicants only whose credentials are approved by the credentials committee of the board.

Sec. 7. The board shall refuse to grant a certificate to any person convicted of a felony, or guilty of gross unprofessional conduct, or who is addicted to any vice to such a degree as to render him unfit to practice osteopathy, and may, after due notice and hearing, suspend or revoke such certificate for like cause.

Sec. 8. All persons holding a legal and valid certificate to practice osteopathy in this state at the time of the passage of this act, shall be considered as licensed under the provisions of this act, and accorded all the rights and privileges herein provided for osteopathic physicians and surgeons.

Sec. 9. Section 65-1201 of the General Statutes of 1935 is hereby repealed.

Sec. 10. This act shall take effect and be in force from and after its publication in the official state paper."

Section 3 and 8 contain the most amazing fea-

tures of the bill. Anyone familiar with the history and the fundamental theory of osteopathy knows that the practice of osteopathy was initiated as a "science" depending upon manipulation wherein the use of drugs and surgery was made unnecessary and that at least until recently no osteopathic school claimed to teach these subjects in accordance with the medical viewpoint and that no osteopath claimed to practice them. It is, therefore, remarkable to observe the osteopaths today claiming in the Kansas Legislature that all of the practitioners are as well trained in these subjects as our doctors of medicine and that they are capable of engaging in a complete practice of medicine and surgery. Most certainly no osteopath can justify this present position unless he is willing to admit that osteopathy has abandoned its own therapeutic concept.

Another feature of particular interest is the reciprocity provision which is coupled with the fact that the complete privileges demanded would mean that Kansas would become the haven of all osteopaths in the United States who desire to obtain a medical permit without meeting the requirements of the usual laws regulating the practice of medicine and surgery.

Still another matter of great importance to the public and the healing professions of Kansas is the precedent involved wherein one or more professions may practice the therapy of another profession without meeting the usual qualifications. The present proposal means that Kansas would have two boards with two standards of admission regulating the practice of medicine and surgery and it would also mean that the other professions of healing could ask to obtain the same privileges with the same arguments that the osteopaths are now using. A situation of this kind could obviously mean only one thing—that the public receives no protection from healing licensure and that the quality of medicine and surgery in Kansas would seriously deteriorate through the fact that good physicians would obviously be unwilling to enter the state.

The medical profession frequently finds an obligation placed upon its shoulders to take the responsibility for defeating detestable public health proposals. This is apparently another situation which medi-



cine has met since its inception and over which it has usually triumphed. Every physician in the state who takes pride in the accomplishments of his profession in the saving and protection of human life and who respects the safety and welfare of Kansas, must do everything in power to defeat this pernicious proposal.

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## EPIDEMIC DIARRHEA OF THE NEW-BORN

Occasional reports of epidemics of infectious diarrhea among the new-born in nurseries of excellent repute remind the general practitioner, obstetrician and pediatrician of a condition that may readily be encountered in local hospitals. Although not common, such epidemics undoubtedly occur with greater frequency than a review of the literature, until lately, would lead one to believe; many of such instances being unreported because of either a lack of laboratory data or a fear of the local comment unfavorable to the hospital. Following years of virtual suppression, the recent publications on this subject in outstanding medical journals indicate a more healthy scientific attitude. It is well to keep in mind the possibility of such occurrences along with an intelligent plan for controlling them. The very nature of the epidemics, usually explosive in onset, and attended with a high morbidity and mortality offers little time for temporizing before tremendous havoc has been created.

The symptom complex, although varying with each epidemic consists primarily of a severe intestinal toxemia; with acute onset accompanied by drowsiness, abdominal distention, marked dehydration, rapid loss of weight, shock and diarrhea, with rarely pus and blood in the stool. In some epidemics, evidences of an acute upper respiratory infection have preceded the onset of the diarrhea. Acute otitis media, mastoiditis and pneumonia, that sometimes occur, are usually considered secondary to the debilitated condition of the patient, and not of primary importance.

The effort to determine the causative factor in these epidemics always proves a difficult task, rarely

successful. Dysentery bacilli of Flexner and Sonne types, the Morgan bacillus, bacillus mucosus, and a variety of organisms not thought of as highly virulent to man have been reported. Virus studies made by the New York City Department of Health and at the Rockefeller Institute have thus far failed to throw any light on the morbid agent. A filterable virus, an organism, or even a variety of organisms non-pathogenic for an older individual, but pathogenic when introduced into the intestinal tract of the new-born may prove responsible. Post-mortem examinations of the infants who died during the various epidemics have revealed few pathological changes and no characteristic lesions.

To control an outbreak in an institution, it has been learned that temporizing in the hope that the disorder will abate, is a mistake. Any suspected case should be isolated immediately, the nursery closed to all admissions and emptied as speedily as possible. Thorough cleansing and renovation of the nursery should follow.

In view of the unknown nature, the high mortality and lack of effective treatment, it is of paramount importance that preventive measures be seriously considered. The spread of fatal diarrhea in the new-born raises the question of whether present day practices are beyond reproach.

Critical appraisal of housing, communal equipment, nursery traffic and technique show them in many instances to be faulty to a dangerous degree. Correction of these faults must follow the lines of tightening of technique. It may be necessary to institute individual cubicle isolation or even disperse the nursery, holding the babies in smaller groups. Rigid asepsis must be applied to anything coming in contact with the baby's mouth or nose.

The departments of health of New York City and Chicago, working with representatives of the county medical societies and the Academy of Medicine have adopted standard regulations governing lying-in institutions and nurseries for the new-born. Such measures may in time, prove helpful in preventing these disconcerting outbreaks. Local hospital groups could profitably compare their new-born care to the same standards.—L. C. E.

## CANCER CONTROL

### PRE-CANCEROUS AND CANCEROUS DERMATOSES

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The term "pre-cancerous" is attached to a group of skin manifestations which, if followed to the end result of their development, may be malignant tumors of the skin. A great many lesions, such as verruca seborrhoea and keratosis senilis, although clinically benign, already show malignant degeneration of their cellular constituents when they are examined under the microscope.

It is doubtful if any one method of treatment can be recommended to the exclusion of all others. The use of surgery, diathermy, x-ray and radium, and the combined use of these methods, have all found their place in the treatment of skin cancers. The well-trained therapist is not a faddist. He should individualize in every case and be prepared to use the ideal physical agent or combination of physical agents for the case in question. By means of different physical methods or their combinations, one may arrive at the same result. This is only a matter of personal experience and technic.

Caustics of various kinds in the form of pastes, applied without preliminary operative interference such as curettage, have seldom been used during the last few years, except by the quack and illegal practitioner, who continues to attract the credulous and unsophisticated public by his alluring advertising and propaganda. Rare, indeed, is the case of cancer

#### PRE-CANCEROUS LESIONS

Name	Pre-disposing causes	Localization (Common)	Clinical appearance	Biopsy	Pathology	Treatment
Senile Keratosis	Old Age Sunlight Dry non-pigmented skin	Face Hands Forearms	Irregular, brown or gray scaly patches with ill defined borders Firmly adherent scales Usually multiple	Necessary when indurated or shows inflammatory borders or if it bleeds easily	Hyperkeratosis Mild perivascular infiltration In corium	Electro-dissication Cautery Radium X-ray CO <sub>2</sub> snow
Seborrhoeic Keratosis	Old Age Seborrhoeic skin	Back Chest Face Hands	Sharply circumscribed, round or oval, brown to brownish black, elevated patches Greasy friable scales	Necessary when indurated or shows inflammatory border	Hyperkeratosis Acanthosis Perivascular infiltration in corium	Electro-dissication Cautery Radium X-ray CO <sub>2</sub> snow
Leukoplakia	Smoking Dental caries Syphilis Poor dental hygiene	Tongue Oral and genital mucosae	Irregular milky white patches, and streaks Slight elevation, and induration	Necessary when thick, warty or fissures are present	Hyperkeratosis Acanthosis Chronic inflammation of papillary & subpapillary layers of corium	Improve dental hygiene Remove carious teeth Omit tobacco and alcohol Electro-dissication Cautery Radium Treat Lues if present
Kraurosis Vulvae	Unknown Chronic inflammatory condition with trauma Trophic Endocrine	Vulvae	Atrophy of labia minora Thin, dry, atrophic skin with leukoplakia Pruritis	Necessary when warty nodule present Fissured leukoplakia	Atrophy of both derma and epidermis Chr. infl. of corium Areas of leukoplakia	Local hygiene X-ray Complete vulvectomy with plastic repair
	Overdose of X-ray or radium	Any location	Dry, atrophy, pigmentation or depigmentation Telangiectasia, sclerosis, keratosis, scar and late ulceration	When ulceration or keratosis develop	Atrophy of epidermis Basophilic degeneration of cutis framework Dilatation of capillaries	Fulguration or Surgery
Xeroderma Pigmentoos	Congenital Lack of protective mechanism to sunlight	Face Hands Exposed surfaces	Pigmentation and atrophy, keratosis freckling Resembles chronic radio dermatitis	Necessary if keratosis are present	Can find changes of lentigo, atrophy, verrucous, papillomatous, and carcinomatous	Is incurable Protect against sun Remove keratosis and cancers with fulguration and x-ray or radium
Lupus Vulgaris	True tuberculosis of skin Scar of years' duration	Face Hands Any part of body	Deep seated, yellowish brown nodule Crusting, ulceration, scarring, and atrophy are common	Necessary if ulceration present Pearly nodule or warty excrescences	Tubercles in upper corium Acanthosis Hyperkeratosis	Rest and good hygiene Gerson diet Fulguration Finsen light
Moles (Naevi)	Embryonic rests Irritation	Any part of body	Pigmented or non-pigmented soft tumors on the skin of varying sizes	Necessary if lesion is growing, or if inflammatory halo present	Naevoid cells Varies with types	Fulguration Surgery
Cornu Cutaneum	Irritation	Face Hands Scalp	Peculiar horny outgrowths of skin	Always necessary	Tremendous hyperkeratosis Chronic inflammation of corium	Fulguration Surgery



of the skin, not too far advanced, which cannot be cured today, by the expert with the use of x-ray radium or surgical diathermy.

Early diagnosis and treatment in all pre-cancerous and cancerous conditions of the skin cannot be over-emphasized. The treatment should be prompt and thorough, with the aim to achieve complete eradication at one sitting. The object of any treatment is to destroy every malignant cell, and if this can be accomplished, regardless of the method, a permanent cure is the result.

It is now almost universally recognized that in order to produce a good therapeutic effect with roentgen or radium rays on a skin carcinoma, it is necessary to apply a dose which will have a cytotoxic action. In other words, it is necessary that a dose of sufficient strength be applied to produce a primary destructive effect on the carcinoma cell,

without, however, injuring the normal tissue around the lesion. Undoubtedly, the most common error committed is the use of small, inadequate exposures to roentgen or radium rays, leading to the establishment of a radio-immunity. Thus, the failure of the first irradiation renders further therapy exceedingly difficult and hazardous, and markedly reduces the chance of cure. The importance of effecting a complete sterilization of the tumor process at the first irradiation is not sufficiently appreciated.

### CONCLUSION

1. All pre-cancerous lesions should be destroyed and carefully followed.
2. Early diagnosis and treatment of all pre-cancerous and cancerous lesions cannot be over-emphasized.
3. Caustics of various kinds in the form of pastes

### CANCEROUS LESIONS

Name	Pre-disposing causes	Localization (Common)	Clinical appearance	Biopsy	Pathology	Treatment
Basal cell epithelioma	Follows precancerous dermatosis Sun and wind Chronic irritation Old age	Face Hands	Nodular or ulcerative lesions, slow growing Induration Telangiectasia at borders	Always	Strands of dark staining basal cells invading the corium Elongated rete pegs Moderate inflammatory reaction in papillary bodies and underlying cutis	Fulguration followed by x-ray or radium Surgical excision followed by x-ray or radium
Squamous cell epithelioma	Follows precancerous dermatosis Sun and wind Chronic irritation Old age	Face Hands Mucous membranes	Nodular, rapidly growing, indurated lesion Later ulcerates and has rolled border Mostly on mucous membranes	Always	Epithelial proliferation Mitotic figures numerous Strands and whorls of squamous cells in cutis "Pearls" Normal architecture completely gone	Fulguration followed by x-ray or radium Surgical excision followed by x-ray or radium
Baso-squamous cell epithelioma	Follows precancerous dermatosis Sun and wind Chronic irritation Old age	Face Hands Mucous membranes	Cannot be distinguished from basal or squamous cell except by biopsy	Always	A combination of basal and squamous infiltrating cells with pearl foundation	Same as squamous cell
Melano-carcinoma	Irritation of pre-existing melanoma	Any place on body	Black raised mole with evidence of growth	Always	Alveolar infiltration cells usually of nevoid type Hyperplasia of connective tissue and infiltration of lymphocytes and plasma cells	Wide surgical excision X-ray Radium
Bowen's Disease	Unknown	Any part of body Torso	Round, oval or serpiginous, slightly raised, scaly, indurated plaque, well margined	Always	Hyperplasia Dyskeratosis Mitotic figures Numerous Bowen's cells "corps ronds"	Fulguration followed by x-ray and radium
Paget's disease of nipple	Unknown	Nipples	Chronic weeping eczema around nipples with induration	Always	Hyperplasia Dyskeratosis Paget cells Inflamed infiltration of lymphocytes and Plasma cells Proliferation of lining epithelium of ducts	Total mastectomy followed by irradiation Remove axillary nodes
Sarcoma	Unknown	Rare Any location	Small cutaneous or sub-cutaneous nodule that is growing slowly	Always	Varies with the type as mentioned in classification	Wide surgical excision X-ray and radium on lymphosarcoma Other types not radio-sensitive

are used only by the quack and illegal practitioner.

4. There is no one method which can be used to the exclusion of all others.

#### PRE-CANCEROUS

1. Senile Keratoses
2. Seborrheic Keratoses
3. Leukoplakia
4. Kraurosis Vulvae
5. Radio-dermatitis
6. Xeroderma-pigmentosa
7. Lupus Vulgaris
8. Moles
9. Cornu Cutaneum

#### CANCEROUS

1. Basal cell epithelioma
2. Squamous cell epithelioma
3. Baso-squamous cell epithelioma
4. Melanocarcinoma
5. Paget's disease of nipple
6. Bowen's disease
7. Sarcoma
  - (a) Fibrosarcoma
  - (b) Spindle cell sarcoma
  - (c) Giant cell sarcoma
  - (d) Neurogenic sarcoma
  - (e) Dermato fibrosarcoma
  - (f) Melano sarcoma
  - (g) Lympho sarcoma

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## EYE, EAR, NOSE & THROAT

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### CORNEAL INJURY WITH COMPLICATIONS

H. C. Markham, M.D.

Parsons, Kansas

J. E. B., age twenty six years, an employee of a large corporation came to the company hospital during the third week of May, 1938, with a supposed injury to his left eye. The company surgeon had treated him for several days with his condition becoming steadily worse. He complained of photophobia, lachrymation, anorexia, loss of weight, very intense pain and practically no sleep for a week. He stated that he thought he could stand anything until this condition developed. Since then he had changed his mind as it had about exhausted all of his endurance. He had been handling chat for quite a while and believed some particles had gotten into his eye and this circumstance was the responsible factor for all of his trials and tribulations.

After the administration of  $\frac{1}{4}$  gr. morphine hypodermically and a liberal instillation of local anesthesia I was able to proceed with the examination of his condition which revealed the following: Cilia normal, no entropion or ectropion. The palpebral conjunctiva extending back into the retrotarsal fold was thoroughly infected with trachoma. Ocular conjunctiva was intensely inflamed. The cornea was completely interlaced with very fine blood vessels, translucent and appeared as though it had been freely sandpapered. A large oblong ulcer, with ragged edges was located just below the pupillary area. The ulcer extended in the 4:30 o'clock—9 o'clock direction. The edges were undermined and quite irregular and dipping down into the sub-

stantia propria in some portions. An attempt had been made to dilate the pupil which was not visible in its entirety, nevertheless the photophobia was intense. Pannus was pronounced in the upper portion of the cornea. This is the picture of the problem that baffled my early efforts. This case appeared to be of a type similar to those with which I had dealt over a period of years, however, it proved to be a much more resistant type.

#### TREATMENT

All attempts at dilatation resulted in failure. A liberal use of morphine was required to obtain rest. The ulcer was cauterized and apparent improvement with lessened pain prevailed for a period of thirty six hours when trouble broke loose again. There was an increase in pain and a pronounced extension of the area involved. Cauterization was repeated for a second and third time with unsatisfactory results. It was very evident that there was only one goal in front of us—perforation sooner or later with all of its attendant difficulties and disaster that goes with the loss of an eye and the patient's opinion of the physician's ability. Local treatment of the lid availed nothing. Pain, narcotic requirements and inability to eat had wrought havoc with his physical and mental state.

His plight was discussed with him in detail, he being unusually intelligent for a person engaged in the type of work he had been performing. He stated that "Anything offering a degree of success and relief would be satisfactory; go ahead and do whatever your best judgment dictates." Consequently the morning of June 5 he was operated under ether anesthesia. The trachoma follicles on the lid and retrotarsal folds were expressed and followed by a very thorough grattage that left nothing to the imagination. The eye was flushed with warm boric solution and a saemich section was done in the long axis of the ulcer. The section extending from the temporal sclero-corneal junction to approximately one MM of the nasal sclero-corneal junction.

A few drops of one-half per cent solution of ethylhydrocuprein hydrochlorid was instilled and some one per cent atropine sulphate ointment was sandwiched between the lids. A light bandage was applied and patient returned to bed. Without an anodyne he slept all night, ate a very good breakfast and felt in good spirits. A greatly swollen lid was in evidence and an inspection of the cornea was out of the question, medication previously mentioned was instilled and a light dressing applied. The second morning swelling had subsided enough to discover that there was an adhesion between the corneal wound and the lid. A blunt probe was passed be-



tween the eyeball and the lid breaking loose the attachment and reopening the anterior chamber.

The adhesion was a kindness on the part of nature, the aforementioned medication was instilled and eye kept closed. The fourth morning a good view of the cornea was obtained. Pannus and corneal vessels were rapidly disappearing. The edges of the ulcerated area were becoming smoothed out and the excavated area was filling in at a rapid rate. The pupil was fully dilated, a condition which could not be obtained before operation. Inspection of the lid and retrotarsal fold showed a very satisfactory state of progress. Ethylhydrocuprein hydrochlorid was continued, atropine being discontinued.

Patient was discharged on the eighth day. The following results had been achieved: Trachoma was completely eradicated, ulcer healed rapidly and patient was entirely free from pain after operation. He has a very useful eye with vision of sixty per cent +.

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## MEDICAL ECONOMICS

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### A DOCTOR'S RESPONSIBILITY UNDER THE KANSAS UNEMPLOYMENT COMPENSATION LAW

D. H. Roney\*

Topeka, Kansas

The Kansas Unemployment Compensation law is based on one of the eleven Titles of the Federal Social Security Act, passed by Congress in 1935, and provides for a system of "job insurance".

The Kansas insurance law is less than two years old, and while it does not insure Kansas physicians unless they are permanent members of a hospital staff which has eight or more employees who otherwise meets the liability requirements under the law, its broad application and public interest should lead all physicians to make themselves familiar with the theory and provisions of the law and the results of benefit payments. In many communities the payment of unemployment benefits will be reflected in the economic welfare of homes and families whence come the people with whom the physician must deal.

While the Kansas Unemployment Compensation Law has nothing to do with hours of labor or wages,

it does provide that the unemployed person be compensated for his lack of employment without it having to come in the form of relief. It is a job insurance on which the premiums are paid by the employer and is based on the worker's former wages earned in covered employment.

Job insurance has no connection with health insurance, in fact it is based on the work record which implies good health of each worker. In order to be eligible for job insurance the worker must at that time be able and available for work. Also the worker must have previously earned wages in covered employment in order that he will have sufficient wage credits to obtain benefit payments.

The program set up under the law for the payment of unemployed benefits combats the idea that "the world owes every man a living". The benefits paid are not relief or charity but come to him as a matter of right, based on his previous work record. The fact that benefit payments belong to the worker by right—that they are collected from his job insurance policy—will help to preserve his morale and help him to maintain his self-respect. This with the help of the Kansas State Employment Service, which is one of the sections of the Unemployment Compensation Division, will distinguish the willing worker, who desires to give a fair day's work for a fair day's pay, from the person who is always seeking unearned and undeserved support from the public. The objective of the law is to stabilize employment and through such stabilization to provide sustained buying power.

Unemployment benefits which are paid weekly are based on the worker's previous earnings, and are limited to approximately half the worker's weekly wages and to approximately 16 weeks duration. It is expected that these payments will enable the worker to avoid application for relief or appeal to charity during periods of temporary unemployment, and that the continued buying power which will find its way into all business channels, even though limited in amount, will act as a cushion or shock absorber for business during periods of depression.

The unemployment problem is comparatively a modern question. The word "unemployment" did not appear in our dictionaries until about 1880, and the question did not attract serious attention in the United States until about 1910. Technological unemployment, meaning unemployment resulting from the displacement of men by the use of improved and new machines and processes, has been on the increase from the beginning of the twentieth century, and the theory of unemployment reserves has been discussed for years, but no plan for setting up such reserves had been given serious consideration by

\*Supervisor, Research and Information Division, Kansas Unemployment Compensation Commission, Topeka, Kansas.

Congress until the Social Security Act was passed August 14, 1935. The unemployment problem approached the acute stage soon after the World War, and relief measures were introduced in Congress in the early twenties. The return of prosperity during the following years appeared to make such legislation unnecessary at that time, but the economic and industrial crash of 1929, and its continuation in varying degrees of intensity up to the present time, has made the public more or less "unemployment conscious" and resulted in enactment of the Federal Social Security Act and unemployment insurance laws by all the states.

Unemployment demanded the attention of England and other governments of Europe much earlier than its effects were felt in the United States and those countries began experimenting to find a solution of the problem as early as the 1890's. The first efforts there to provide an unemployment insurance fund were directed to voluntary contributions by employers, supplemented by government grants. This plan did not prove satisfactory and in 1911 England adopted the plan of compulsory contributions by employers and employees, based on payrolls as the main source of income. France, Germany, Sweden, Denmark and other governments of Europe, about twenty-one in number, now have unemployment insurance programs in successful operation. The principal difference between the systems of Europe and the programs of Kansas and the other forty-seven states and Alaska, Hawaii and the District of Columbia, all of which now have unemployment compensation laws, is that benefit payments in Europe are generally based on the "need" of the worker, the amount paid varying in many instances with the financial condition and number of dependents in the worker's household, while in the United States program the employee's work record is the only factor which enters into the calculation of benefit payments due. Also in Europe the workers are usually required to contribute a percentage of their earnings to the compensation fund while in the United States only seven states require contribution by the worker, the remaining forty-four units requiring all contributions to the fund to be made by the employers.

Formerly, in the United States the open physical frontiers, being the natural resources in farm lands, timber, minerals, and water power, provided fields in which a majority of their citizens could work and their social security problems. However, in the modern industrial world, with most of the natural frontiers practically closed or occupied, with its population now  $66 \frac{2}{3}$  per cent urban instead of  $66 \frac{2}{3}$  per cent rural as it was in the last decade of the nineteenth century, and with millions of peo-

ple entirely dependent on the pay envelope, it became imperative that steps should be taken to meet the present situation of labor and to build up confidence for the future.

Present conditions in the industrial world appear to have aroused interest and created public sentiment to such an extent as to indicate that unemployment insurance is here to stay. Job insurance is designed as a cushion to assist workers who have formerly been left to shift for themselves until they find reemployment.

The Kansas Unemployment Compensation Law is based on the philosophy of making provision in times of plenty for the rainy day—for short periods of unemployment which workers all experience eventually both in times of prosperity and depression.

It is not intended that the government or the state shall relieve the worker of his personal responsibility in providing for himself and his dependents or to lead him to think that thrift and foresight are to be discarded as out of date. The enactment of unemployment compensation laws by the states does not mean that the unemployment problem is solved. None of these laws nor all of them together provide a cure-all and no one claims that the Kansas law ever approaches the goal of perfection, but a foundation has been laid upon which it is hoped there can be built a system which will reduce to a minimum the hazards of unemployment. The problem demands the thoughtful consideration of the best minds in each community.

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## TUBERCULOSIS CONTROL

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The following extracts from an article by Dr. Arnold Rice Rich, which was presented before the Hennepin County Medical Society in Minneapolis, Minnesota, April 4, 1938, appeared in the February 1939 issue of a pamphlet, *Tuberculosis Abstracts*, issued monthly by the National Tuberculosis Association:

### AGE INFLUENCES TUBERCULOSIS

Differences in the tuberculosis mortality rate at the different periods of life have been regarded by many as evidence that there are corresponding differences in native resistance at the various age periods. Simple mortality rates are, however, influenced by important factors other than age. We are interested, therefore, in knowing the number of deaths in relation to the infected portion of a given age group. Statistics regarding the incidence of in-



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fection by age groups are incomplete and woefully lacking for adult groups and for infants in the first year of life. Another difficulty is that hypersensitivity to tuberculin may fall to a low level a year or two after infection and consequently tuberculin test surveys do not always give a true picture of the amount of infection.

Despite these difficulties it is possible to make a conservative estimate of the incidence of infection for each group. The author has collected statistics from numerous sources and constructed a table showing the ratio of tuberculosis deaths to the number of infected persons by age groups. From this table we may draw the following conclusions:

1. That tuberculosis is most fatal during the first year of life;
2. That it is much less dangerous, but still markedly so during the succeeding several years;
3. That the period between five years and puberty is a strikingly "safe" period, during which the mortality from the disease decreases in spite of the fact that the incidence of infection increases.
4. That following the age of puberty there occurs a sharp increase in the death-hazard among those infected.
5. That the increase in the tuberculosis mortality-hazard continues steadily into adult life, reaching a peak in the middle twenties, after which it continues at an elevated level throughout the remainder of the life span, but with variations that depend upon sex, occupation and economic conditions.
6. That in old age there occurs a second peak of mortality-hazard.

The most dangerous age period in which to be infected is that of the first five years of life, and most particularly during the first year; the safest period is that between five years and puberty. From puberty onward the chance of dying if infected increases rapidly until it reaches a peak, the precise age period of which is inconstant in the total population and may be different for each sex at different periods of time. The mortality rate among the infected is always high in old age, but it may be lower than the first adult peak. How are these age peculiarities to be explained, and what relation, if any, do they bear to age-determined differences in native resistance?

#### INFANCY

Since infants cannot move about to court infection, they are ordinarily exposed either to heavy and continued infection or to none at all. Malnutrition, more frequent in infancy than later, affects resistance to tuberculosis. The native ability of the infant to resist infections in general is deficient. In tuberculosis, the rapidity with which an effective degree of acquired resistance develops following

infection plays a very important role in determining the outcome of a primary infection.

#### BETWEEN ONE AND FIVE YEARS OF AGE

During the second year of life the external influences which favor a high death rate among those who become infected are still operative but to a lesser degree. After the second year of life the death rate of those who become infected falls markedly. This may be due to the fact that the ability to move freely outside the home is accompanied by the opportunity for acquiring single, slight infections which can be well resisted. Children between two and five years of age have a decidedly greater ability to form immune bodies than have infants.

#### BETWEEN FIVE YEARS AND PUBERTY

The tuberculosis mortality rate among those infected is markedly lower than that in any other decade. While free movement at this age leads to a great increase in primary infections, far fewer of these infections produce progressive fatal disease. In this decade, children are most protected against the vicissitudes of life—they are safeguarded in the home and in school and are spared the stresses and debilitating influences of later life. They enjoy outdoor play, and sufficient rest and sleep.

In addition there is evidence that the mechanism for developing acquired resistance ("serological maturity") becomes established. Antibody-producing power reaches its height during the period from five years to puberty.

#### ADOLESCENCE

The sharp rise in the tuberculosis mortality curve at the period when puberty adjustments take place, suggests that pubescence may be accompanied by a depression in resistance. While opportunities for acquiring infection are greater at this age, this factor does not account for the mortality rise; mortality increase for outstrips infection increase. Nor can the mortality increase be accounted for by the assumption that active tuberculosis at this period represents the evolution of infection acquired earlier.

The mortality rise in adolescent females is more pronounced and occurs at an earlier age than in adolescent males. The puberty alterations likewise are more profound and occur earlier in females than in males. Progressive lesions in adolescence often show characteristics indicative of a lower degree of resistance.

#### ADULT LIFE

Tuberculosis mortality continues to rise into adult life and ordinarily reaches its peak in the middle twenties. The effects of occupational hazards, child-bearing, care of the family and the struggle for existence are now in full play. The terms "over-stress



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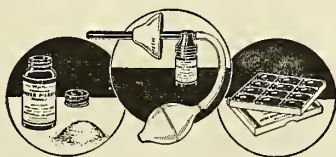
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and strain" and "the run-down state" while vague and unscientific, nevertheless express very real hazards in the body's struggle to hold a tuberculosis infection in check.

There are many who maintain that the previously uninfected adult is more susceptible to tuberculosis than is the child and that it is an advantage, therefore, to become infected in childhood. The author does not hold that view. After analyzing the advantage and disadvantage conferred by a primary infection, he strongly urges that all individuals should avoid spontaneous and uncontrolled infection as far as is reasonably practicable.

### OLD AGE

In the final period of life, after sixty, the tuberculosis death rate rises sharply. Increased opportunities for exposure to infection can certainly not be the cause here, for the aged tend to draw away from contact with the world. One, therefore, suspects the presence of factors that depress resistance.

In the aged, tuberculosis often progresses with strikingly few symptoms, save for the cough which is often not severe. It is, therefore, frequently unsuspected even when tubercle bacilli abound in the sputum. Such cases may be the source of fatal infection for children and it is of great importance to investigate the reason for a persistent cough in an older person. The belief that tuberculosis in the aged is more benign than at other age periods is not well founded. All available evidence indicates that the aged have a lower degree of resistance than the middle-aged, though the responsible factors are not precisely known.

The author concludes: "The peculiarities of susceptibility and resistance at the various age periods, and the manner in which external factors act to alter resistance, constitute, perhaps, the most important problems in tuberculosis today, not only from a theoretical but, indeed, from a highly practical standpoint; and they deserve the most serious and intensive investigation. In this review of the general outlines of the problem, I have sought chiefly to stress the narrow limits of our present information, rather than to attempt to provide a series of comfortable, theoretical explanations for these complex and incompletely understood phenomena."

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So closely related are the stomach and the heart that they are frequently confused when trouble in one or the other arrives.—Hygeia.

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There is nothing to dread about cancer of the breast if one finds it in time, because it can be cured if treated early!—Hygeia.

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## NEWS NOTES

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### COMMITTEE MEETINGS

The following are the minutes of the meetings of the Committee on School of Medicine and the Committee on the Control of Tuberculosis:

A meeting of the Committee on School of Medicine was held in Emporia, on December 18. Members present were: Dr. F. J. McEwen, Wichita, chairman; Dr. L. B. Spake, Kansas City; Dr. J. A. Blount, Larned; Dr. N. P. Sherwood, Lawrence; Dean H. R. Wahl, Kansas City; Dr. L. F. Schuhmacher, Meade; Dr. C. M. Alderson, Dodge City; Dr. Philip W. Morgan, Emporia; Dr. L. R. McGill, Hoisington; Dr. Fred Angle, Kansas City; Dr. O. O. Stoland, Lawrence; and Clarence Munns as Executive Secretary.

The minutes of the last meeting were read and approved.

Dean H. R. Wahl presented an extensive report concerning admissions to the University of Kansas hospitals. Upon motion by Dr. Angle, seconded and carried, it was agreed that the report by Dean Wahl should be presented in the annual report of this committee.

The committee requested that Dean Wahl prepare an article for the Journal describing the present program for new facilities at the medical school.

The committee agreed to assist the medical school in the handling of its legislative recommendations in any way possible. Upon motion by Dr. Schuhmacher, seconded and carried, it was agreed that the committee should endorse the need for a new medical-pharmaceutical building at Lawrence.

The possibility of obtaining additional funds for research from various foundations, federal agencies, and other sources was discussed and tabled until the next meeting.

Dean Wahl reported concerning the present policy for admission of students to the University of Kansas School of Medicine.

Dean Wahl also reported that the staff of the medical school would attempt to provide regular scientific articles for the Journal.

The problem of obtaining needed teaching material at the University was also discussed.

Adjournment followed.

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A meeting of the Committee on Tuberculosis was held in Topeka, on December 11, 1938. Members present were Dr. Henry W. Tihen, Wichita, Chairman; Dr. N. C. Nash of Wichita; Dr. C. H. Lerrigo of Topeka; Dr. C. F. Taylor of Norton. Dr. Clifton F. Hall of Topeka; Dr. E. A. Trump of Ottawa; Dr. F. L. Loveland of Topeka; and Dr. J. L. Lattimore of Topeka were present as guests of the Committee, and Clarence G. Munns was present as Executive Secretary.

Minutes of the last meeting were read and approved.

First item of business was a discussion of post-graduate courses on Tuberculosis. Dr. Lerrigo reported that he had discussed this matter with Dr. L. R. Pyle, Chairman of the Scientific Program Committee of the 80th Annual Session, and that a speaker on Tuberculosis will be provided on that program. The Committee asked Dr. Lerrigo to cooperate with Dr. Pyle in selecting a speaker for this purpose. Dr. Lerrigo also reported that he had not as yet completed arrangements to present a post-graduate course at Bell Memorial Hospital and that he would report further on this possibility at the next meeting. Dr. Nash was asked to continue his activity in connection with establishing a list of speakers for presentation of Tuberculosis programs at county medical society meetings.



# RECENT ADVANCES IN THE SCIENCE OF NUTRITION

## VI. The Chemical Identification of Thiamin or Vitamin B<sub>1</sub>

● An outstanding accomplishment of American Biochemical research has been the chemical identification—by degradation and by synthesis—of thiamin or pure vitamin B<sub>1</sub> (1). Thus, another dietary essential long known by its physiologic functions has been identified chemically, in this instance as a quaternary thiazole.

This discovery is of the most basic importance in the field of vitamin B<sub>1</sub> research. Determination of the chemical nature of this factor permits not only explanation of certain previously known facts concerning vitamin B<sub>1</sub>, but in addition, has opened new fields of research. One of these is already concerned with the development of a reliable chemical method for estimation of thiamin which will be generally applicable to foods.

At present, quantitative determination of vitamin B<sub>1</sub> necessarily requires the use of one of the several bioassay methods available for that purpose. None of these is entirely satisfactory (1, 2). Perfection of a chemical method for quantitative measurement of thiamin in foods would add greatly to our knowledge of its occurrence in nature,

as well as permit more comprehensive studies of factors which might influence the stability of vitamin B<sub>1</sub> in foods. We have a relative paucity of such data relating to vitamin B<sub>1</sub> when the available information on vitamin C is considered.

It should also be stated that the synthesis of thiamin—which is now produced on a commercial basis—has already provided the clinician with a most useful diagnostic tool. Administration of the pure vitamin in cases of suspected thiamin deficiency, with notation of the therapeutic response, constitutes the most trustworthy means of detecting avitaminosis B<sub>1</sub>. After the diagnosis has been confirmed and the immediate deficiency corrected by administration of thiamin, it is desirable that future adequate supply of vitamin B<sub>1</sub> be obtained through dietary readjustments (1).

In this connection, commercially canned foods deserve particular mention. Nutritional research (3, 4) on various members of this class of foods has demonstrated their potential value when included in a varied diet calculated to supply optimal amounts of vitamin B<sub>1</sub>.

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- (1) 1938. J. Amer. Med. Assn. 110, 727.  
 (2) 1938. Ibid. 111, 927.  
 (3)a. 1936. J. Nutrition 11, 383.  
 b. 1936. J. Amer. Diet. Assn. 12, 231.

- (4)a. 1932. J. Nutrition 5, 307.  
 b. 1932. Ind. Eng. Chem. 24, 457.

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Dr. Nash reported concerning the survey of x-ray facilities in the state which the committee made under his direction.

The real reason for this survey originated thru a desire to assist in improving Kansas tuberculosis diagnostic facilities.

Dr. Nash was asked to arrange a meeting of radiologists in the state for discussion of possibilities in expanding and improving Kansas x-ray facilities.

Upon motion made by Dr. Lerrigo, seconded and carried, it was suggested that Dr. Taylor should confer with the Board of Administration and the Medical Advisory Committee of the Norton Sanatorium in regard to present requirements for admission to that institution.

Dr. Taylor reported concerning x-ray consultations now being given by the staff at the Norton Sanatorium, and asked instructions about future work in this regard. The Committee asked that this matter be discussed with Dr. Nash.

Dr. Hall reported concerning the Kansas State Board of Health's problem on Tuberculosis reporting. He was asked to prepare Journal articles and a series of bulletins on this subject.

Dr. Nash was asked to discuss with Kansas radiologists the possibility of establishing a standardized price for provision of indigent x-ray. The Committee suggested that a price of \$2.50 or \$3.00 might be fair and reasonable for this purpose, and the committee will recommend one of these two figures as a minimum price after Dr. Nash has had an opportunity to consult with the Kansas radiologists in regard to this matter.

Upon motion of Dr. Taylor, seconded and carried, the Committee recommended a minimum price of \$4.00 per refill for the pneumothorax therapy of indigent patients.

Upon motion by Dr. Taylor seconded and carried it was moved that the committee wholeheartedly approve and assist in any way possible the Christmas seal sale of the Kansas Tuberculosis and Health Association.

Decision was made that the next meeting of the Committee shall be held in Norton at the Norton Sanatorium on a Sunday morning during the latter part of February, 1939.

Adjournment followed.

The first meeting of the new Society Committee on Control of Heart Disease was held in Emporia on January 29. The committee is composed of the following members: Dr. Philip W. Morgan, Emporia, Chairman; Dr. T. T. Holt, Wichita; Dr. James G. Stewart, Topeka; Dr. Maurice Snyder, Salina; Dr. Fred E. Angle, Kansas City; Dr. H. H. Jones, Winfield; and Dr. Fred J. McEwen, Wichita. The following are the minutes forwarded to the central office by Dr. Morgan:

Six states throughout the United States of America were reported to have such committees. Various plans have been used by county and city medical groups over the country. The committee is at present collecting information which it is hoped will be useful to the Kansas profession in handling its cardiovascular problems. It is hoped to ultimately be able to present dependable statistics as to the types of heart disease and relative incidence in Kansas. From these facts the Society could, it is hoped, offer its membership detailed advances in the conditions which are most prevalent. One of the first obstacles encountered is the lack of uniformity in nomenclature. This may be due to many causes. As an example of that protean nomenclature the following diagnoses in the Vital Statistics depart-

ment has been supplied by Dr. F. P. Helm of the Kansas State Board of Health: pericarditis, acute endocarditis, unspecified endocarditis under forty-five years, chronic endocarditis, chronic endocarditis over forty-five years, acute myocarditis, myocarditis under forty-five years, chronic myocarditis, disease of myocardium unspecified, angina pectoris, diseases of coronary arteries, functional diseases of heart, other and unspecified disease of heart.

In subsequent issues of the Journal the committee will present summaries of its work and apparent recommendations. The American Heart Association is cooperating in the survey and if arrangements can be made the members of the Society will be supplied widely used and recommended criteria for classification and diagnosis of heart disease and the monthly publication of the American Heart Association called "Modern Concepts of Cardio-Vascular Disease."

The Council of the Society met in Topeka on Wednesday February 8 at the Hotel Jayhawk. Major items of discussion were the measures pending in the Legislature at the present time.

### JOINT MEETING

Members of the Society Committee on Medical Economics held a joint meeting with members of the Kansas State Hospital Association at the Hotel Jayhawk on Sunday, January 28 in Topeka.

Foremost topic of the meeting was the discussion of a group hospitalization plan for Kansas.

The Kansas State Hospital Association will submit to the present Legislature a bill which will enable the Association to render a non-profit hospital service. The bill will follow in substance the proposed model law enabling the formation of a non-profit hospital service association as recommended by the committee on hospital service and council on hospital care of the American Hospital Association. A summary of the proposed bill follows:

"In substance, the proposed model law, as recommended by the American Hospital Association, provides for the organization of a non-profit corporation created for the purpose of establishing, maintaining and operating a non-profit hospital service plan whereby hospital care may be provided by said corporation to such of the public as become subscribers to said plan under a contract which entitles each subscriber to certain hospital care. The corporation shall operate under the insurance code and shall be subject to the supervision of the State Commissioner of Insurance.

Contracts for the rendering of hospital service to subscribers shall first have the approval of the State Commissioner of Insurance and all contracts shall constitute direct obligations of the hospitals for hospital care; rates to be charged shall at all times be subject to the approval of the Commissioner of Insurance. The services of medical doctors shall not be included in said contracts.

The books and records of said corporation shall at all times be available to the Commissioner of Insurance. Said corporation shall be declared a charitable and benevolent institution, its funds and property being exempt from taxation."

### GRADUATE COURSE

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completed its sixth postgraduate course in the western part of the state, with 89 physicians out of the 178 registered, in attendance.

The course was held from November 28 to December 23, 1938, and consisted of lectures on obstetrics and pediatrics which were presented to the physicians in thirty-nine counties. In ten of these counties all practicing physicians were enrolled.

The county medical societies in the respective counties of Norton, Colby, Garden City, Liberal, and Dodge City, acted as hosts for the course.

### BLIND PROGRAM

Dr. C. J. Mullen, State Ophthalmologist, Kansas City, Kansas, issued the following reports for December, 1938 and January, 1939, respectively, pertaining to the Kansas State Board of Social Welfare restoration of sight program:

#### December, 1938

No. of cases approved as eligible for treatment to date.....	434
No. of cases completed treatment .....	83
20 cases still eligible for Aid to the Blind	
63 cases no longer eligible for Aid to the Blind	
No. of cases under treatment .....	118
No. of cases eligible for treatment (not heard from.....)	233
Statistics Concerning Completed Cases in December	
Total cost of completed cases in December .....	\$1,411.85
Average cost of cases completed in December..	64.18
Doctors Fees .....	58.58%
Hospital Fees .....	30.77%
Optical Fees .....	9.91%
Drugs .....	.74%

#### Disposition of Eye Reports

No. of eye reports into the office (as new cases).....	1615
No. of cases non-eligible for Aid to the Blind.....	327
No. of cases eligible for Aid to the Blind .....	1274
No. of cases pending .....	14

#### January, 1939

No. of eye examinations .....	1671
No. of cases eligible for Aid to the Blind .....	1325
No. of cases non-eligible for Aid to the Blind by eye examination .....	341
No. of cases pending .....	5
No. of cases app. eligible for treatment to date.....	462
No. of cases under treatment as new cases.....	96
6 other cases are under treatment who have completed one type of treatment	
No. of cases completed treatment to date.....	114
28 cases still eligible for Aid to the Blind	
86 cases non-eligible for Aid to the Blind after treatment.	
Total costs of 23 cases completed during January	
1939 .....	\$2063.88
58.9% Doctors Fees .....	1220.00
30.8% Hospital Fees .....	635.00
9.5% Optical Fees .....	200.00
.4% .....	8.88

### NEW MOTHER'S MANUAL

The revised fourth edition of the Mother's Manual compiled by the Society Committee on Maternal and Child Welfare and the Child Hygiene Division of the Kansas State Board of Health, has recently been forwarded to

every physician in Kansas. Copies for patients may be secured by writing the Division of Child Hygiene, Kansas State Board of Health, 935 Kansas Avenue, Topeka, Kansas.

The Board of Health states that there has been a marked increase in requests for this booklet since the mailing of the revised edition and also that copies will be mailed directly to the patient if the physician so desires.

### ART TELLS HISTORY OF AMERICAN MEDICINE



"Beaumont and St. Martin"

"Beaumont and St. Martin" is the first of six large paintings in oil memorializing "Pioneers of American Medicine" which artist Dean Cornwell will complete in the next few years. Others in the series are: Dr. Oliver Wendell Holmes, Dr. Ephraim McDowell, Dr. Crawford W. Long, Dr. William T. G. Morton, and Major Walter Reed, and one woman, Dorothea Lynde Dix who, while not a physician, stimulated physicians to study insanity and feeble-mindedness.

Arrangements to supply physicians with free, full color reproductions of "Beaumont and St. Martin" without advertising, and suitable for framing, have been made with the owners, John Wyeth and Brother, 1118 Washington Street, Philadelphia. Please address requests to The Kansas Medical Society, 406 Columbian Building, Topeka, Kansas.

### COUNTY SOCIETIES

The Atchison County Medical Society held election of officers for 1939 at a meeting on January 10 in Atchison. The following were elected to serve: Dr. F. I. Stuart, Atchison, president; Dr. R. C. Jeffries, Atchison, vice president; and Dr. F. K. Bosse, Atchison, secretary-treasurer.

Dr. C. H. Warfield, Wichita, was the guest speaker on the scientific program at a meeting of the Butler-Greenwood County Medical Society on January 13 in Eureka. His subject was "Chest X-Ray" illustrated with lantern slides.

The regular meeting of the Clay County Medical Society was held in Clay Center on January 18. Dr. L. S. Nelson, Salina, as guest speaker presented a talk on "Modern Treatment of Fractures of the Neck of the Femur".



# Chronic Nasal Congestion

One of the perennially miserable patients whom the physician is called upon to treat every year is the unfortunate individual whose nose is "stopped up all winter" from chronic head colds or sinusitis.

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Members of the Comanche County Medical Society re-elected Dr. R. A. J. Shelley, Coldwater, as president, and Dr. Paul A. Lindquist, Coldwater, as secretary, at a recent meeting of that society held in Coldwater.

Dr. E. W. Hellweg, Arkansas City, was elected president of the Cowley County Medical Society at a meeting in Winfield on January 26. Others elected to serve for 1939 are: Dr. N. B. Fall, Winfield, vice president; Dr. W. G. Weston, Arkansas City, secretary.

Dr. W. A. Smiley, Junction City, was re-elected president of the Geary County Medical Society at a meeting of that society held in Junction City on January 25. Other officers re-elected to serve during the coming year are as follows: Dr. R. J. Lanning, Junction City, vice president; Dr. L. S. Steadman, Junction City, secretary-treasurer; Dr. Robert M. Carr, Junction City, State Meeting Delegate.

The following officers were elected to serve during 1939 at a recent meeting of the Johnson County Medical Society; Dr. D. E. Bronson, Olathe, president; Dr. Kenneth W. Carbaugh, Overland Park, vice president; Dr. R. R. Becker, Spring Hill, secretary-treasurer.

The Labette County Medical Society held election of officers for 1939 at a meeting in Parsons, January 18. Those elected to serve are: Dr. L. A. Proctor, Parsons, president; Dr. M. C. Ruble, Parsons, vice president; Dr. O. E. Stevenson, Parsons, secretary-treasurer; Dr. A. C. Baird, Parsons, State Meeting Delegate. Dr. O. E. Stevenson, gave a talk on "Demonstration of the Electrocardiograph".

Members of the Lyon County Medical Society entertained the Doctor's Wives Club at a dinner-meeting held in Emporia on January 10.

Approximately twenty members of the Marion County Medical Society and the Marion County Dental Association held a joint meeting in Marion on January 4. Following a dinner a non-medical motion picture was presented.

Dr. J. B. Anderson, Centralia, was elected as president of the Nemaha County Medical Society at a meeting held in Sabetha, on January 17. Dr. F. E. Wrightman, Sabetha, will serve as secretary-treasurer, and Dr. S. Murdock, Jr., Sabetha, State Meeting Delegate.

The Pawnee County Medical Society held a meeting in Larned on January 2 with Dr. C. E. Sheppard, Larned, as the principal speaker on the scientific program.

Members of the Pratt County Medical Society were hosts to members of the Pawnee County Medical Society at a dinner-meeting in Pratt on January 27. Dr. Vern L. Pauley, Wichita, spoke on "Renal Anomalies", and Dr. N. C. Nash, Wichita, talked on "Carcinoma of the Uterus".

The Reno County Medical Society held their annual election of officers at a recent meeting in Hutchinson. Those elected to serve are: Dr. J. J. Brownlee, Hutchinson, president; Dr. I. E. Hempstid, Hutchinson, vice president; Dr. H. R. Barnes, Hutchinson, secretary-treasurer.

Election of officers was held at a meeting of the Rice County Medical Society on January 26 in Sterling. The following were elected to serve for 1939: Dr. L. J. Beyer, Lyons, president; Dr. E. R. Hill, Lyons, vice president; Dr. A. A. Sprong, Sterling, secretary-treasurer. Dr. J. V. Van Cleve, Wichita, presented an illustrated talk on "Fungus Diseases".

Dr. A. Jeffers, Smith Center, was elected president of the Smith County Medical Society for 1939 at a recent meeting held in Smith Center. Dr. V. E. Watts, Smith Center, will serve as secretary and Dr. H. Morrison, Smith Center, State Meeting Delegate.

The Sumner County Medical Society held its annual election of officers at the January meeting held in Wellington. Those elected to serve are: Dr. J. E. Hill, Conway Springs, president; Dr. Earl E. Clark, Belle Plaine, vice president; Dr. J. M. McGrew, Wellington, secretary-treasurer; Dr. Farris Evans, Conway Springs, State Meeting Delegate.

A dinner-meeting of the Wilson County Medical Society was held in Neodesha on January 9.

The Wyandotte County Medical Society held a meeting in Kansas City on February 7. Dr. Donald F. Coburn, Kansas City, spoke on "Neurosurgical Treatment of Pain" and Dr. O. M. Longenecker, Kansas City, spoke on "Appendicitis".

## MEMBERS

Dr. R. H. Rollow, formerly of Chanute, has moved to St. John where he will continue his practice.

The December issue of the Current Medical Digest carried a condensation of an article entitled "Errors in the Field of Internal Medicine" by Dr. J. M. Porter, Concordia.

Dr. L. W. Hatton, formerly of Halstead has opened an office in Salina.

The members of the Kansas Board of Medical Registration and Examination attended the meeting on Medical Education and Licensure which was held on February 13 and 14 in Chicago, Illinois.

## DEATH NOTICES

Dr. John Clifton, 75 years of age, a resident of Vermillion died at the home of his daughter in Topeka on January 15. Dr. Clifton was born in Illinois in 1864 and received his degree of medicine from the St. Joseph Medical College in 1901. He began his practice of medicine in Vermillion, and remained there until the time of his death. He was a member of the Marshall County Medical Society.

Dr. John Thomas Davis, 85 years of age, died at his home in Liberty on December 26. Dr. Davis was born in Warren County, Indiana, in 1853. He received his medical education at the Michigan University School of Medicine at Ann Arbor, and was graduated from there in 1879. He located at Elk City in 1881 and later moved to Liberty where he continued his practice until 1919 when he retired from active practice.

Dr. Marcus Claude Roberts, 60 years of age, died in Hutchinson on January 6. Dr. Roberts was born in 1878 and received his medical education at the Northwestern University Medical School in Chicago, graduating in 1906. He was a member of the Reno County Medical Society.

## BOOK REVIEWS

TEXT BOOK OF PATHOLOGY by E. T. Bell, M.D., professor of pathology, University of Minnesota, Minneapolis, Minnesota. Contributors, E. T. Bell, M.D., B. J. Claw-



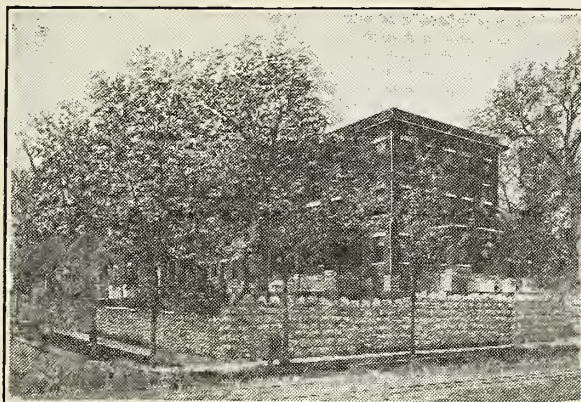
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son, M.D., Hal Downey, M.D., J. S. McCartney, M.D. and C. J. Watson, M.D. Published by Lea and Febiger, Philadelphia, third edition, 1938. 894 pages, 412 engravings and 2 colored plates. Price \$9.50.

This is an excellent general pathology, well written and prepared, excellent engravings and ample discussion of pathological problems confronting the student and physician. This edition discusses many subjects, not ordinarily included in a general pathology. For example: Injuries due to chemical and physical agents. The chapter on thrombosis and embolism presents the matter in concrete form. The author has written an excellent chapter on tuberculosis, also one on venereal diseases, especially covering syphilis. For clinical application, the chapter on fungus diseases covers the ordinary fungi encountered. A complete classification of tumors is given with ample discussion of connective tissue, epithelial, muscle, nerve and blood forming organ tumors, with a specially good chapter on carcinoma. A portion of the book is then devoted to diseases of the various organs, calling attention to the various pathological conditions that may be encountered in a given organ. Some of the comparatively newer diseases are discussed, such as psittacosis, Rocky Mountain spotted fever and etc. More space than usual is devoted to the pancreas and to a discussion of the pathology of the ductless glands. For a general pathology, the author gives a good general consideration to neuro-pathology and to hematology, subjects that are usually omitted. This is the best general pathology that the reviewer has had the privilege of reading and is worthy of a place in the library of every physician. J. L. L.

**HERNIA**—Leigh F. Watson, M.D. Publishers, C. V. Mosby Company, St. Louis, Missouri. Price \$7.50. (Second Edition).

This excellent monograph on hernia, the first edition of which was published in 1924, has been revised and brought up to date, chiefly because the introduction and popularization of the injection treatment rendered the old edition obsolete. There have been, in addition to the inclusion of the injection treatment, numerous other changes—elimination of procedures no longer in common use, and addition of new ones of value.

The discussion of the subject of hernia is complete in every detail—anatomy, etiology, classification, complications, anesthesia, operative procedures, and the injection treatment, in which is included a chapter on the fitting of trusses. The whole volume is well arranged, and illustrated with many excellent drawings which add much to the value of the book.

This book is a masterpiece and covers its field completely, concisely, and authoritatively, both in the field of the common hernias (inguinal, femoral, umbilical, and ventral) and the rare types (such as obturator, sciatic, lumbar, perineal, and sliding hernias, and hernias of the appendix, Meckel's diverticulum, bladder, ureter, ovaries, and so on). It is an interesting book to read "straight through", and an excellent one to which one may turn in "looking up" some isolated facts.—O. R. C.

**INJECTION TREATMENT OF HERNIA**—Carl O. Rice, M.D. Publishers, F. A. Davis Company, Philadelphia. Price \$4.50.

Though the injection treatment of hernia has in the past been considered an unethical procedure used only by irregular practitioners, it now seems to have become established as having a definite and useful place in the armamentarium of the surgeon. Such books as this one will do much to popularize and standardize the procedure, and increase the effectiveness with which this type of treatment will be given by the average surgeon.

Dr. Rice has emphasized throughout his book the choice of proper cases for this type of treatment, the anatomical, physiological, and pathological basis of treatment, and the necessity of the treatment being adequate and carried out systematically and thoroughly. Failure in any of the links of the chain means failure of the entire course of treatment, and without complete cooperation of doctor and patient, this method will surely fail.

There is some confusion in a mixture of old and new terminology in the chapter on anatomy, but this is easily forgiven when the excellent material in the book is discovered. Adequate consideration is given to technic and to the after care. At the conclusion of the book there is a summary of the existing state compensation laws as related to hernia. Kansas physicians will be disappointed, however, to find that Kansas is one of the three states omitted from the tabulation.

Anyone intending to treat hernias by the injection method, or expecting to intelligently advise this type of treatment for selected cases, could profit by reading this book.—O. R. C.

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## AUXILIARY

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The Labette County Auxiliary met December 28 at the home of Mrs. G. W. Hay, Parsons. Reports of the State Auxiliary Board meeting at Hays were given by Mrs. R. W. Urie, State Chairman of Organization, and Mrs. T. D. Blasdel, State Hygeia Chairman. Papers on public relations were read by Mrs. Urie and Mrs. H. C. Markham, the latter paper having been prepared by Mrs. N. C. Morrow who was unavoidably absent.

A joint meeting of the Southeast Kansas Medical Society and Auxiliary was held at Vanes Patio, December 21. The attendance represented nearly every town in the district. Both the medical society and auxiliary were represented in the program.

Mrs. J. W. Shaw of the Sedgwick County Auxiliary gave a review of the book, "The American City and It's Church," by Dr. Samuel Kincheloe at a regular meeting of the Womans Home Missionary Society of the First Presbyterian Church, Wichita.

Mrs. H. O. Anderson and Mrs. Floyd C. Beelman of the Sedgwick County Auxiliary are actively interested members of the current affairs club of the Wichita chapter of the American Association of University Women.

Mrs. E. J. Nodurft, Sedgwick County Auxiliary, President of the Wichita Council P. T. A. and state third vice president attended the January meeting of the state board of P. T. A. in Topeka.

Mrs. J. W. Shaw, Sedgwick County Auxiliary, reviewed the book "The Journey Tapiola," by Robert Mason at the meeting of the Wichita University Dames Club January 19.



One of a series of advertisements prepared and published by PARKE, DAVIS & Co. in behalf of the medical profession. This "See Your Doctor" campaign is running in the *Saturday Evening Post* and other leading magazines.



## ***STORM WARNING FOR FEBRUARY: RISING MERCURY***

THE YOUNGSTER in the picture isn't terribly sick.

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For she knows that, at this time of year particularly, *any* cold may be the threshold of pneumonia. She knows that February shares with March the dubious honor of being a "pneumonia month;" that, together, they constitute the season of the year when pneumonia is most prevalent and most dangerous.

Throughout the next six or eight weeks especially, it will be wise to

take every possible precaution against pneumonia. Get plenty of rest—for pneumonia's greatest ally is fatigue. Avoid any over-exposure, particularly to extreme cold and dampness.

But above all, if anyone in your family has a cold and his or her temperature rises above normal, don't delay! Call your physician at once. Watch out, too, for chills, pain in the side or chest, and a cough. They, also, are danger signals that should be heeded promptly.

If your doctor is called at once, there is less to fear from pneumonia than ever before. Medical science can offer pneumonia patients more

help—can bring about more and quicker recoveries—than in any previous "pneumonia season."

But the pneumonia germ works fast, and every hour counts. If your doctor's treatment is to be most effective, he *must* be called early.

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The December 12 meeting of the Sedgwick County Auxiliary was held at the Innes Tea Room. Holiday decorations prevailed. Dr. Hazel Branch, head of the Zoology Department of Wichita University was guest speaker. Her subject was, "Women in Science." A group of Christmas carols was sung by Estere Sevin.

Members of the Sedgwick County Auxiliary Board met at the home of Mrs. G. W. Kirby December 5 at luncheon. After the business meeting a musical program was presented by the Drowatzky Sisters.

The Sedgwick County Auxiliary met January 9 at an elaborate luncheon in the Hypatia Club. Mrs. Glen C. Barlette of Belle Plaine was the guest speaker. Her subject was, "Flower Arrangement, and Flowers Best Adapted to Kansas." The Bartlette arborature is known all over the nation by flower lovers.

The Sedgwick County Medical Society was host to their Auxiliary and members' wives and other guests at the annual yule banquet December 20. The attendance was approximately 200. At this meeting occurred the installation of the medical society officers for the coming year. The entertainment of the evening was a presentation of songs by the Wichita Civic Boys Choir under the direction of Mrs. Dorothy Benze, musical sketches, and varieties by a group under the direction of Coleman Ashe. The speaker of the evening was W. F. Lilleston, Wichita attorney.

Mrs. L. E. Knapp, press-publicity chairman of the Sedgwick County Auxiliary, is performing a painstaking and conscientious task in her department. Each month brings to our desk an envelope packed with clippings from the Wichita news papers. No item containing the name of an Auxiliary member escapes her vigilant eye. The items are sent with the member's names underlined. When one reads of the great activity of Sedgwick members and the publicity received, one is not puzzled by the success of Sedgwick county in getting things done. All these items will appear in the state scrap book, although many are denied printing in the Journal because of their social character. The state book will go to the annual national convention.

Only a few county auxiliaries are sending reports regularly. Some of those with populous centers are remiss. Will not you who have been hiding your light or your press-publicity chairman under a bushel let your light shine forth to encourage this department and bring the benefits of publicity to yourselves and others?

The state board of the Kansas Auxiliary held a well attended and most successful and enjoyable meeting in Hays, December 1 with the Central Kansas Auxiliary as hostess organization. The meeting was honored by the presence of our National President, Mrs. Charles Tomlinson of Omaha, whose address described the usefulness of the Auxiliary and its obligations to the public and profession. The meeting and luncheon at the Lamar Hotel were attended by thirty-six ladies.

The Central Kansas Auxiliary elected the following officers at their December meeting. Mrs. Alza McDermott, Ellis, president; Mrs. P. S. Brady, Hays, vice president; Mrs. A. J. Horesji, Ellsworth, secretary; Mrs. L. W. Reynolds, Hays, treasurer.

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# The Journal Of THE KANSAS MEDICAL SOCIETY

*Owned and Published by The Kansas Medical Society*

Volume XL

MARCH, 1939

Number 3

## SOME SURGICAL PRINCIPLES IN THE TREATMENT OF IN- JURIES AND INFECTIONS OF THE HAND\*

Sumner L. Koch, M.D.†

Chicago, Illinois

I appreciate greatly the honor of addressing your society tonight. Eleven years ago this month I had the privilege of meeting with you and in the intervening years have had the pleasure of becoming better acquainted with some of you. The years have flown by quickly, and any gaps in your ranks have been filled by a splendid group of young men starting their careers in the practice of medicine. Some of them I have known as students, and it is a real pleasure to greet them, and all of you again.

This evening, at the risk of giving a somewhat disjointed presentation, I would like to discuss briefly a few phases of the surgery of the hand that seem to me of particular importance to the general practitioner and the young surgeon, and to emphasize them with the help of a few lantern slides.

The first is the question as to what constitutes effective and efficient first aid. Too often in the presence of sudden and unexpected trouble the medical man becomes a "human being" instead of a cool and dispassionate artisan. Propelled by the urge to "do something quickly", which overwhelms most of us in the face of an emergency, by the commendable impulse to be of greatest possible help and by the urging of excited bystanders he often goes much farther than is necessary at the moment, and actually does his patient harm instead of good.

To be specific, a man plunges down a stairway and sustains a lacerated penetrating wound of the volar surface of the wrist. The wound bleeds profusely and the doctor who is hastily summoned whips a forceps from his instrument case and catches

the bleeding artery. He hurries the patient to the hospital, and in the emergency room of the hospital hastily cleanses the wound and ligates the bleeding vessels. He recognizes the fact that a number of important structures are divided, and decides that he must have further assistance. Four hours after the injury a consultant sees the patient and repairs the injured nerves and tendons. Twenty-four hours later the patient's steadily ascending temperature reaches 103 degrees; the wound area is tense and swollen, and when a few of the sutures are removed thin seropurulent fluid escapes. A smear shows many diplococci in pairs and short chains.

By contrast, a second patient, a meat cutter in the stock yards, while trimming livers, cuts his left hand across the base of the thenar eminence. He is rushed to the doctor's office as quickly as possible. The doctor takes one look at the bleeding hand, covers it with sterile gauze and a pressure bandage and hurries him to the hospital. There within an hour the patient is anesthetized and the hand and forearm thoroughly washed with soap and water without removing the original dressing. When the hand is thoroughly cleansed the dressing is removed and the tissues about the wound carefully cleansed. No effort is made to wash the clean cut wound, but some of the soapy solution does enter it and run over it. Finally, the wound edges are held widely apart and the wound is thoroughly irrigated for approximately five minutes with warm salt solution. The abductor pollicis brevis is completely divided, the opponens almost completely divided. The divided muscles are approximated with mattress sutures of fine silk, the fascia is sutured and the skin closed without drainage. A pressure bandage and splint are applied. The wound heals by primary union. The patient leaves the hospital on the fourth day. He wears the splint for three weeks, until the injured muscle is soundly healed, and then returns to work.

Why did the first case become infected with virulent organisms and the second heal by primary union and without even inflammatory reaction? The first injury was a clean glass cut; the second was made with a butcher knife, used to trim livers. Animal liver is a constant habitat for the organisms of

\*Read before the Shawnee County Medical Society, Topeka, Kansas, October 3, 1938.

†From the Department of Surgery, Northwestern University Medical School, Chicago.



Fig. 1. Crushing lacerated wound of hand with division of extensor tendons of middle and ring fingers. Soap and water cleansing; suture of tendons and repair of wound one hour after

injury; primary union. a, Before operation. b, c, d, Functional result ten weeks later.

gas gangrene, and divided muscle bundles furnish an excellent medium for bacterial growth. Although I cannot prove it my belief is that the different results were due to the character of the first aid treatment. Forceps not completely sterilized, catgut ligatures applied in haste in an emergency room, interested bystanders with uncovered mouths and noses talking excitedly close to the open wound—these possible sources of infection we have come to fear more than the knife or the glass or the metal that caused the wound. Although we constantly emphasize in our teaching the importance of immediate cleansing and repair of wounds when the patient is seen within a few hours after the injury has been sustained I would not willingly attempt such repair

if bleeding vessels in the open wound have already been ligated. That conclusion was reached as the result of a disastrous experience many years ago and the first case cited is almost an exact repetition of that early experience.

Without wishing to place too much emphasis on the possibility of adding virulent infection to an open wound it is my opinion that we could often be accused of gross negligence in our care of injuries. May I tell you of an exaggerated case of carelessness and its disastrous results? A few years ago a physician saw a patient with a subcuticular infection of a finger. He took scissors from his instrument case and cut away the epidermis overlying the small accumulation of pus. Because he was in a hurry he

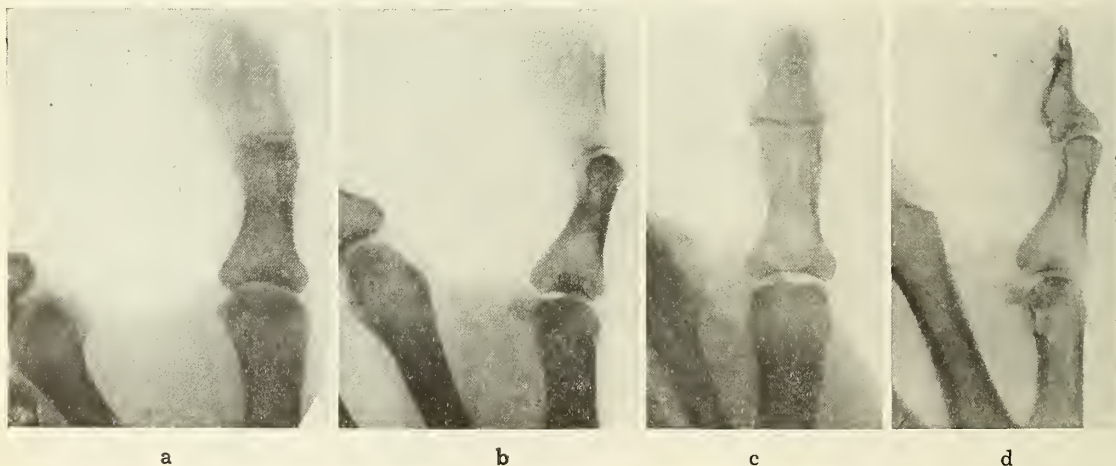


Fig. 2. Case 1. a, b, X-ray films of distal phalanx of left thumb twenty-three days after the onset of a felon which had been incised three times before patient was first seen. Anterior

closed space was opened widely and the sequestrum simply lifted out. A thin shell of bone remained just in front of the nail. c, d, Appearance six years after operation.





Fig. 3. Case 1. Appearance and function of thumb six years after operation.

simply rinsed the scissors under running water and dropped them into his bag. Later in the day he reached quickly into the bag and jabbed his right middle finger into the sharp scissor point. Within twenty-four hours signs of acute spreading infection developed. When I saw him forty-eight hours later he was desperately ill; the distal half of the hand was already cyanotic and insensitive; the infection had involved the entire forearm and the arm, almost to the shoulder. In another forty-eight hours the battle was over.

To come back to our starting point, and to put it concretely, what constitutes logical and efficient first aid treatment? The application of a sterile dressing over the open wound and a snug bandage; a splint if the wound is extensive or if bones are broken—and nothing more. Slight pressure will stop even severe bleeding. Direct manual or digital pres-

sure over the bleeding wound after the sterile dressing has been applied is a very satisfactory method of controlling hemorrhage. If an extremity is involved an elastic tourniquet can usually be provided. In these days of rapid transportation there is rarely any necessity for doing more than applying a simple sterile dressing large enough to cover the wound completely, and with sufficient pressure to stop bleeding.

When the patient reaches the hospital he should be treated as any major surgical case: an anesthetic administered if necessary; a blood pressure band applied to be used as a constrictor for securing a bloodless field; a wide area about the wound carefully cleansed with soap and water; finally, the wound itself gently cleansed, and thoroughly irrigated with warm salt solution. When the cleansing process is complete, if one is convinced that he has been able to transform the contaminated wound into a clean wound, surgical repair is carried out. (Fig. 1).

Some of you may say, "I can't possibly take every patient with a compound wound or severe laceration to the hospital"; and I can realize the force of such a statement when hospital facilities are not easily available. I would only say, in the first place, that in these days of good roads and splendid transportation such an argument loses some of its force. Many a surgeon has had occasion to say, "If I had realized how serious the injury was I never would have attempted to care for it except in a hospital, where suitable equipment and expert help would have been available." In the second place I will admit very freely that one can do a perfectly "bang up" job under

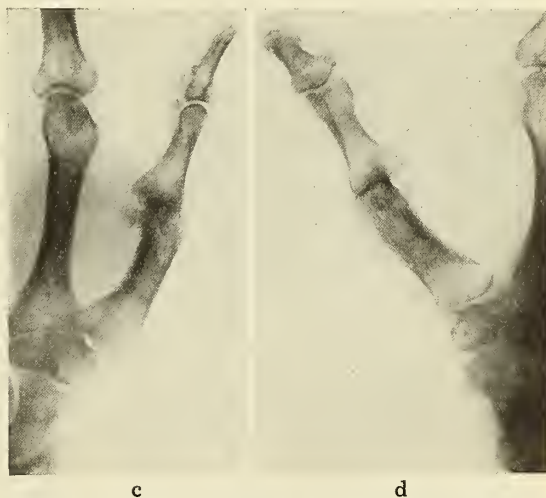
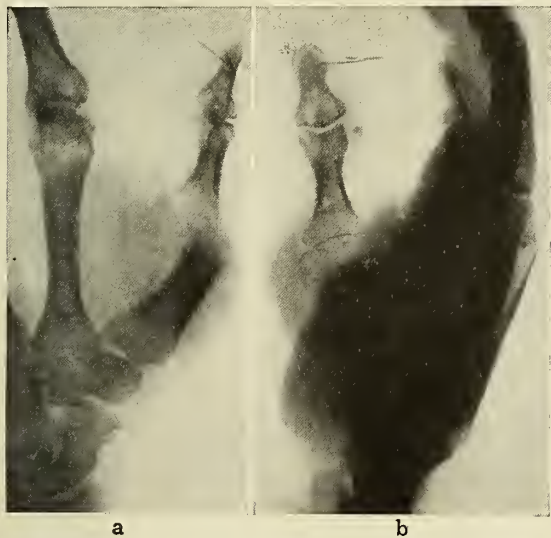


Fig. 4. Case 2. a, b, X-ray films showing involvement of bones forming metacarpophalangeal joint of thumb four weeks after patient had sustained a lacerated wound over the joint, followed by spreading infection of the soft tissues. Treatment consisted of adequate drainage of infected soft tissues, cleanly

surgical care, careful splinting to secure immobilization. The bones and metacarpophalangeal joint were not exposed and not disturbed. c, d, X-ray films showing appearance of bones seven months after the injury and three months after healing of the soft tissues was complete.

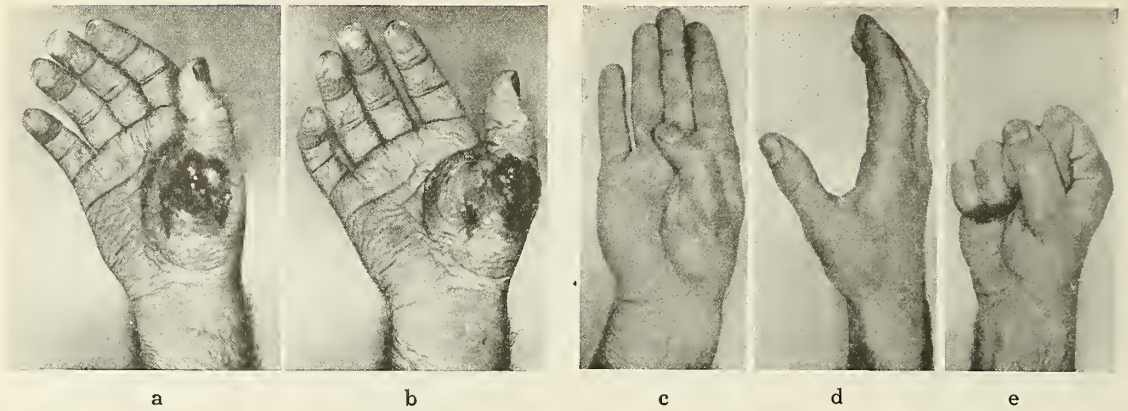


Fig. 5. Case 2. a, b, Appearance of hand on admission to the hospital; and c, d, e, six months later, three months after

healing was complete.

trying conditions if he has the will to do it. It is not necessary to be surrounded by tiled walls and chromium plated sterilizers to carry out a surgical procedure with faultless technique, but there are certain essentials that the doctor's office or the first aid room of a factory or industrial plant do not always afford—sterile linen, sterile gloves, caps and masks to cover nose and mouth, trained assistants.

I have seen young doctors in a room fitted for first aid work attempt to remove a needle from a hand under local anesthesia. The patient continually moving the hand and disarranging the scanty covering of sterile linen; the perspiring surgeons with uncovered heads and faces bending over the blood stained hand, wondering after a half hour's search where the elusive needle could be; and the eventual result—a painful swollen hand with infection of several weeks' duration and the needle still buried in the tissues—all are vivid recollections difficult to efface.

The hospital is equipped to care for surgical pa-

tients, and unless the doctor has a fixed determination to do the job as it should be done, and the patience to carry out before operation time consuming procedures with which he would not have to concern himself in a well run hospital, slips in technique and an unsatisfactory outcome are very likely to result.

The next question is what operative procedure should be carried out in doubtful cases. If one is not certain in his own mind that the contaminated wound has been converted into a clean wound; or if the time that has elapsed exceeds the safe interval of two or three hours it is wiser, after the cleansing is completed, simply to close the wound, or even to leave it unsutured than to run the risk of disseminating infection widely by the dissection and manipulation incident to the repair of divided nerves and tendons. If the wound heals kindly nothing is lost except a few weeks' time. If infection follows the results are disastrous, as many of us have had occasion to witness with sorrow.

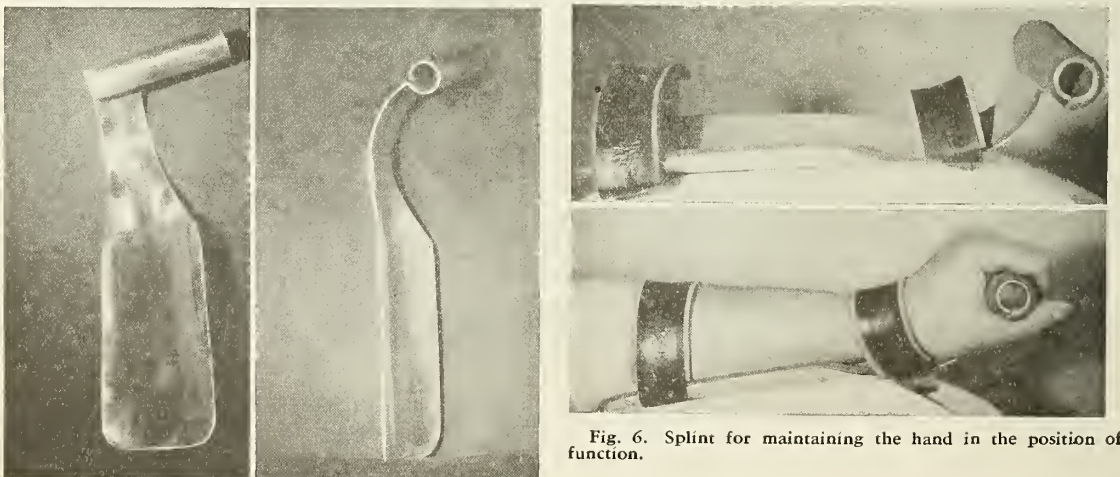


Fig. 6. Splint for maintaining the hand in the position of function.



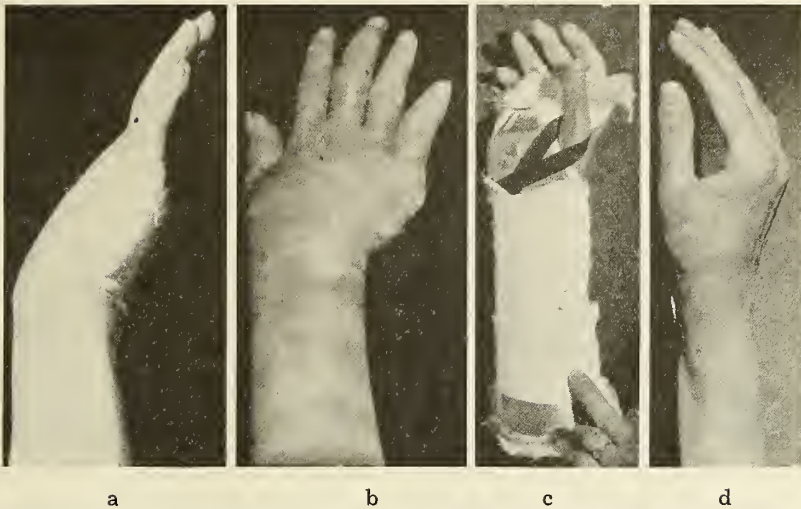


Fig. 7. Result of physical therapy combined with splinting of the hand in the position of function in a case of neglected infection involving the radial and ulnar bursae. a, b, Appearance and position of hand at beginning of treatment. c, Metal splint, similar in principle to that illustrated in Figure 6, with elastic band to abduct and rotate thumb. d, Result at time wound discharge had ceased.

The third question is how long should one wait before carrying out the secondary repair that may be needed. If a wound heals by primary union it still requires about three weeks for inflammatory reaction to subside, and one cannot free nerves and tendons and draw them together easily when the tissues are still infiltrated with serum and blood cells. Rarely would one carry out secondary operation until three weeks had elapsed.

If there has been low grade infection with seropurulent discharge for a week or ten days one should wait for three months after wound healing was com-

plete. If there has been frank suppuration one must wait six months; and if the infection has been due to a streptococcus we would not undertake secondary operation until twelve months after healing was complete. Bacteria live in the deeper tissues for a number of months after a wound is healed. To carry out an operative procedure before sufficient time has elapsed for inflammatory reaction to subside completely and for the deep tissues to become sterile is to risk complete failure.

A fourth and somewhat different question I would like to call to your attention is the problem of bone



Fig. 9. Splint for supporting fingers in extension and thumb in extension and abduction after suture of extensor tendons or injury of radial nerve. By bending the distal end of the splint slightly to permit semiflexion of the fingers this splint serves equally well for maintaining the hand in the position of function.

involvement associated with infections of the hand. Some months ago I wrote a brief paper on "Osteomyelitis of the bones of the hand" which appeared in *Surgery, Gynecology and Obstetrics* in January, 1937. I tried in that paper to emphasize the importance of conservative treatment in the presence of osteomyelitis—in other words, of maintaining adequate drainage of the infected soft tissues, of treating the open wound with cleanly surgical care, and of leaving the bone severely alone.

For some reason, difficult to explain, the first question that occurs to many men when they see an infected finger or an infected hand is whether or not the bone is involved. An x-ray film is made and the radiologist's report is, "Periostitis," or "Beginning necrosis near tip of distal phalanx," etc. Such a diagnosis is the signal for action. The curettes, chisels and bone cutting forceps are mobilized, and the attack is carried out with vigor and directness. The result is further spread of infection, further destruction, and long delay in healing.

If anyone should advise us to open an abscess and then vigorously scrape and incise the wall of the abscess cavity you would say that such a procedure was absolutely to be condemned. Infection which involves bone is identical with infection involving the soft tissues, and the principles involved in the treatment are the same. If an abscess forms it should be drained. Necrotic tissue—the sequestrum—should be lifted out; but the remaining bone—the wall of the abscess cavity should be left alone. If localization has not yet occurred, and if there is present a diffuse inflammatory process without definite demarcation between dead and living bone operative attack is accompanied by the same dangers that are associated with operative attack upon a spreading infection of the soft tissues.

It is our belief that no one can tell by gross inspection how far infection has been carried into bone tissue, nor distinguish clearly between infected bone and normal bone. Under such circumstances the curette or chisel often carry infection into normal bone, and the possibility of recovery without partial destruction of the bony framework is definitely lessened. On the other hand, if the soft tissues are adequately drained, if the open wound is given cleanly surgical care and if operative procedures are limited to the simple removal of any sequestrum that may form preservation of the bony framework and restoration of function can result even though infection is widespread and even though both the bones entering into the formation of a joint are involved. (Figs. 2-5).

Finally, may I say a word concerning the importance of rest in the treatment of injuries and infections of the hand. Hugh Owen Thomas, the father

of orthopedic surgery and the uncle of Sir Robert Jones, constantly emphasized it in his teachings. Today, almost fifty years after his death, this sound and basic principle of good surgery is often completely ignored both in teaching and in practice.

Not long ago a patient came to the Hand Clinic at the Cook County Hospital with hand carefully bandaged and fingers tightly flexed into the palm. When the dressing was removed a long oblique sutured wound over the dorsum of the hand was exposed. She said the tendons had been divided and repaired five days before. I immediately called the intern on the service and asked him why he had not splinted the hand in such a way as to relax as completely as possible the muscles whose tendons had been divided. He replied that the surgeon had instructed him not to apply a splint because he wished "to have the patient move her fingers as quickly as possible." When I asked him if he applied such treatment for fractures of the bones, and if there was any essential difference between fractures of bones and fractures of tendons he confessed that he had never thought of soft tissue injuries as comparable to bone injuries.

This is not a criticism of the young man, but of our teaching of surgery. If we are to improve in our practice it must be the older men who set the example for their interns and students.

In our own work we have found aluminum a convenient and useful material from which to fashion splints (Fig. 6). It can be purchased in sheets and can be cut in any desired size with heavy "tin snips;" and with the help of a few simple tools can be fashioned in accordance with the patient's needs. It is light and has the required tensile strength to retain its shape; it can be sterilized and incorporated in a dressing without fear of adding further infection to open wounds. It can be covered with felt and provided with straps so as to facilitate its use in patients who need "soakings," application of heat and physical therapy.

I can think of no procedures more helpful in the care of injuries and infections of the hand in our hospitals than training the nurses and interns in the cleanly surgical care of infected wounds, and providing the simple tools and the necessary material for making suitable splints that will enable the surgeon to "provide rest for injured and inflamed tissues."

#### SUMMARY

Thoughtful first aid treatment that does not add injury and further contamination to open wounds; in the operating room, atraumatic and patient cleansing of open wounds with plain white soap and water in preparation for surgical treatment; selection of the most suitable time for operation when secondary op-



eration is indicated; conservative treatment of infected cases in which bone involvement has taken place; careful splinting of injured and infected hands so as to put them at rest—all are important and basic principles in the care of injured and infected hands.

## RADIATION THERAPY IN THE TREATMENT OF INFECTIONS

### A COLLECTIVE STUDY

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and

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Lafranchi<sup>15</sup> is credited with the statement that "No one can be a good physician who has no idea of surgical operations and a surgeon is nothing if ignorant of medicine". The use of radiation in the treatment of acute and chronic infections has been thoroughly proven and is recognized by the informed physician and surgeon as a joint ally in the management of various types of inflammatory diseases. Despite experimental observations and clinical testimony Desjardins<sup>2</sup> of the Mayo Clinic has pointed out that this mode of therapy has not been accorded the widespread use which the treatment merits. He theorizes that this may be due to several factors, among which may be (1) the skepticism of the profession as to the curative value of a mode of therapy which has claimed to be effective in a multiplicity of infectious states, (2) the disbelief aroused by the varied explanations of the favorable mode of action of radiation on inflammatory lesions (3) a possible fear that its use might result in permanent skin damage and finally (4) a rather generalized lack of knowledge among physicians regarding the favorable action of radiation on acute and chronic infections.

The first use of radiation in the treatment of infection was about 1902 when it was observed that certain types of infection seemed to improve after x-ray examination. The amount of exposure necessary for examination at that time was considerably more than that required at the present time and it is conceivably possible that patients did receive a sufficient amount of radiation to affect the disease. The observation, however, lead to the erroneous conclusion, now long since discarded, that the rays were bactericidal. Through the years, extensive study of the action of radiation on living tissue and cellu-

lar elements has resulted in our present conception of the mechanism by which irradiation operates in the various pathologic conditions. Desjardins<sup>2</sup> says "Anyone who has had extended experience with radiotherapy of acute inflammation cannot fail to have been impressed by the prompt relief of pain and rapid resolution of lesions when treated early, or the acceleration of suppuration in lesions treated later; by the fact that acute inflammations of various kinds respond at about the same rate to a given dose when treated at a corresponding stage; and by the fact that a small dose of rays is sufficient to produce this effect". He argues that since the reaction to irradiation is consistent and on so many forms of acute inflammation, it would seem logical to conclude that the lesions themselves must have some common factor. This common factor is believed to be the radiosensitivity of certain cells. Pyogenic infections are characterized by varying degrees of leucocytic infiltration. The leucocytes, chiefly lymphocytes, polymorphonuclear and eosinophils, accumulate around one or more clusters of bacteria. The leucocytic regimentation appears to be nature's method of intensifying the production of antibodies and hyperemia facilitates the mobilization and regimentation of the protective mechanisms. Of all the cellular elements in the body, the lymphocyte has been shown to be one of the most sensitive to radiation. Therefore, in circumscribed inflammations the rays act mainly by destroying a portion of the lymphocytes infiltrating the lesion or circulating in the blood vessels which supply the affected area. This disintegration of the infiltrating leucocytes results in the liberation of the antibodies, ferments or endoantitoxins contained in the leucocyte, making available a comparatively larger neutralizing dose of protective material in solution directly in contact with the organism.

Allen<sup>1</sup> in his collective review of the x-ray treatment of infections believes that the combination of the destruction of the leucocytes and the increased phagocytosis of the reticular cells represent the effect of exposure to the roentgen rays in localized infections and probably explains the universal action of the agent. He emphasizes as a well-known pathologic fact that there is a variation in the degree of leucocytic infiltration of different lesions of the same character or similar lesions of a different character, a fact which probably explains why some lesions respond more readily to radiation than others. A lesion characterized by marked hyperemia requires a wider exposure. Such inflammations that are not circumscribed and in which leucocytic infiltration is comparatively slight are improved by small doses of irradiation, undoubtedly as a result of disintegration of many leucocytes within the engorged vessels, liberating into the blood and tissue spaces the pro-

tective substances making them more easily available in combating the disease. This makes possible a biologic defense reaction similar to that described in the more localized inflammations.

The effect on the more chronic inflammations is theoretically explained in the same fashion with the additional fact of the greater radiosensitivity of the connective tissue cells offered by the inflammatory reaction. Chronic inflammations are characterized by varying degrees of leucocytic infiltration, connective tissue proliferation and caseous or perhaps calcareous degeneration. As would be expected, the reaction to radiation is much slower and calls for a different plan of treatment wherein the dosage is fractionated over a longer period of time. This theory has been established as a conclusion by experimental work, being in full agreement with the evidence and clinical observations recorded.

In dealing with infection, the radiation therapist must think quite differently than when dealing with malignancy. It has been repeatedly shown that the more acute the infection, the smaller the dose required to produce a resolution of the process. A more rapid absorption of the soluble substances occurs and it has been stated that the dosage should be inversely proportionate to the acuity of the infection. Early treatment is therefore essential in order to produce a more satisfactory result. Lesions treated early, during the stage of maximum leucocytic infiltration before interference with the increased blood supply has occurred and before suppuration has begun, will show a greater percentage of arrested or aborted lesions. Desjardins<sup>2</sup> says therefore, "The treatment is most effective when other methods are least effective." The treatment is painless and the pain of the lesion is often relieved in a few hours, although there may be a period of pain exacerbation following irradiation. It is a matter of repeated observation that treatment during the suppurative stage tends to hasten or increase suppuration. When the pathologic process has advanced and is complicated by a disturbance in circulation, the end result of irradiation will of necessity be delayed.

The radiation therapy of inflammation found its first and perhaps most effective employment in the field of dermatology. Perhaps the most simple inflammatory lesion, and at the same time the lesion invariably improved by therapy, is herpes simplex. Wendel C. Hall<sup>5</sup> in the Pennsylvania Hospital in Philadelphia, reports fifteen cases of herpes simplex treated by x-ray therapy. In all there were twenty-one lesions. In one case a lesion appeared regularly each month with menstruation. Of course, the etiology of the lesions was usually not demonstrable. A single exposure to a comparatively small quantity of radiation caused prompt relief. Tingling, he reports, fre-

quently disappeared within three hours and inflammatory reaction was gone in from six to eight hours. All patients were definitely benefited. Pohle<sup>25</sup> includes herpes simplex under the broad term of eczema of the nasal orifices, fever blisters, and herpetic lesions, all of which are common in the winter months and frequently due to continued irritating discharges from headcolds. They fall into a class of similar lesions and the majority are promptly cured by one or two applications of unfiltered radiation.

The value of radiation in the management of favus, acne, tinea, hyperidrosis, epidermophytosis and many others need only be mentioned.

Hodges and Berger<sup>10</sup> review their observations of radiation therapy of infection over seventeen years and classify lesions into two groups, in accordance with their susceptibility to radiation. Group 1 consists of localized erysipelas in adults, furuncles and furunculosis, granulomas, infected hemangiomas, cellulitis of certain types, lymphangitis of certain types, Mikulicz' disease, parotitis and rhinophyma. Group 2 comprises carbuncles, blastomycoses and sporotrichoses. These writers feel that all of the infections listed in Group 1 are amenable to x-ray therapy to such a degree that no other form of therapeutics is necessary in their treatment. The lesions in Group 2, however, are of such a nature that irradiation is the important auxiliary in the management of these conditions.

Irradiation therapy may be considered as a specific in the treatment of erysipelas. Small early lesions so treated disappear within twenty-four hours and require no further therapy. The temperature and toxicity in such cases are limited; edema and erythema quickly subside. The dose should be well beyond the border of the lesion in order to avoid further streptococcal invasion of the corium. Children, for some unknown reason, do not respond so well. The erysipelas complicating diabetes or nephritis is not followed by such prompt relief as when it exists uncomplicated. Extensive comparative studies using x-ray therapy, ultraviolet and medical management with an equal number of cases in each group, showed a preponderance of evidence in favor of radiation therapy. There was a reduction in the febrile days, shorter hospital stay, fewer exacerbations, less discomfort and greater economy in the irradiated group than in the other two. Hanken<sup>6</sup> reported twenty-four cases of severe erysipelas with no death. Treatment was begun within the first few hours of the disease and was followed, as a rule, by "a remarkable sudden decrease in the high fever and toxic symptoms". Hanken emphasizes that this treatment is completely harmless and shortens the patient's period of incapacity for work.

Furuncles and furunculosis likewise respond favor-



ably to radiation therapy. When treated early, such lesions may be completely aborted in from twelve to twenty-four hours following administration of a small dose of unfiltered rays. If more advanced lesions are similarly treated, suppuration will be hastened. Furuncles occurring on the upper lip, around the nose, and especially those accompanied by edema and of great importance from the standpoint of possible complicating cavernous sinus thrombosis, are ideally suited to irradiation treatment. Cellulitis and lymphangitis are particularly amenable to small doses of unfiltered rays. Chronic furunculosis, in which the pathologic condition extends deep into the skin with more connective tissue involvement, is best treated by the use of the more heavily filtered rays. Our most enthusiastic patients are physicians whose furuncles or carbuncles have been treated by x-ray therapy. Pertinently, we should add that incision of a furuncle or carbuncle violating the zone of protective infiltration is basically unsound.

Postoperative parotitis, which normally has a mortality of from 35 to 60 per cent shows a markedly lower rate if irradiation therapy is given early. This form of infection is most frequently found following certain operations, particularly on the large bowel, and has been a matter of grave concern until the advent of radiation therapy. The first record of the use of irradiation in the treatment of the complication is credited to Heidenhain<sup>7</sup> who found that it reacted much the same as other acute inflammatory processes. Rankin and Palmar<sup>30</sup> found that moderate doses of radium caused the inflammation to subside if treated soon after the onset; if treated later, suppuration more frequently occurred but was definitely modified, even though softening and suppuration had transpired. The only advantage possessed by radium is that the patient need not be moved. Knupfer and Hummell<sup>13</sup>, of the University of Munich, report a series of forty-nine cases of parotitis referred for roentgen therapy following lapotomy. As controls, twenty-one records of cases treated without irradiation were compared. They showed that early treatment was essential; that roentgen therapy should give good results even when suppurative softening supervened. In almost all cases, radiation was followed by a reduction of temperature and general improvement and the stay in the hospital shorter for those irradiated. In thirty-three cases, one treatment sufficed; in thirteen, a second treatment was necessary.

Conjunctivitis and corneal ulceration may rationally be treated by small doses of roentgen rays and are undergoing intensive study at the present time.

Vernal catarrh is ideally suited to the beta radiation of radium. Pendergrass and Andrews<sup>23</sup> of the University of Pennsylvania report thirty cases, twenty-five of which were treated by the element and

twenty-five by radium emanation. Eighty per cent of these fifty cases were cured. Some danger to the operator in the application of radium element has lead to the safer employment of emanation in a specialized applicator. Reactions invariably follow the employment of beta radiation, then subside with an improvement of the disease process.

The application of radiation in infections in the nose and throat is rational and is enjoying wider application. Cervical adenopathy, tonsillar hypertrophy, adenoids, and post-pharyngeal hyperplasia are all characterized by lymphatic infiltration. The lymphocyte, in its great sensitivity to irradiation, permits employment of radiation without injury to the organs or neighboring tissues. Frequent colds or mechanical respiratory difficulties clear rapidly following radiation therapy. Maximum reduction in the tonsillar hypertrophy and in the lymphatic hyperplasia of the pharyngeal ring is noticed shortly after exposure to relatively small doses of roentgen rays. More encouraging results are seen in the pharyngeal infections co-existing with other conditions such as pulmonary tuberculosis, bronchosinusitis, chronic otitis, etc. Ninety per cent of the 147 cases reported by Torres-Carreras and Sola<sup>29</sup> obtained complete relief following roentgen therapy. Chronic pharyngitis, particularly in children, may be due to hypertrophy of lymphoid tissue following tonsil and adenoid operations but in whom there is not sufficient disease to indicate a second operation. Pohle<sup>26</sup> states that the "Symptomatic relief which the individual obtains is so definite and on the whole so uniform as to justify even the very conservative physician in recommending its use". Results of roentgen therapy in chronic infection of the tonsils is not sufficiently uniform to justify its use as a substitute for tonsillectomy in any case in which the operation is possible or reasonably safe. Children suffering from cardiac disease or tuberculosis and those who have had one or more tonsillectomies and who suffer from sore throat, bronchitis, bronchosinusitis, repeated coryza or pneumonia are ideally adapted to the excellent results which follow roentgen therapy. The fact that permanent relief from pharyngitis is not always obtained is not an argument against it. No one method of treatment in this type of case is sufficient and irradiation may be repeated if necessary in a year or two without danger or discomfort.

Pfahler and Kapo<sup>24</sup> analyze the results obtained from roentgen therapy of 333 cases of acute and chronic cervical adenitis. In 133 a clinical diagnosis of tuberculosis was made; in 22 the diagnosis was confirmed by biopsy. One hundred fifty-nine of the 333 patients returned for observation from which it was shown that 152 patients were cured or partially

cured, while seven did not show improvement. No more than ten treatments were given to any one patient, while the average of treatments given was from two to four.

Radiation is being employed in the treatment of infections of the middle ear. O'Brien<sup>22</sup> of Boston reports 140 cases of catarrhal and secondary deafness treated by x-ray between the years 1929 and 1935. Treatment was given only after customary otorhinolaryngologic procedures had failed. A cycle of nine treatments of ninety r to each ear at weekly intervals was used. In eighteen of the twenty cases in which tinnitus appeared it was cured. Seventy-three of the 140 patients were benefited, sixty-five were unchanged, two were made worse.

Lucinian<sup>18</sup> of Miami, Florida, reports fifty cases of otitis media and mastoiditis treated by roentgen rays. Of the series of fifty, there were no complications or recurrences for as long as three years. The series included thirty-three acute, eight subacute and eleven cases of chronic otitis media. Pain was relieved following the first application of the roentgen ray. In febrile cases the temperature gradually dropped and usually disappeared in from ten to fifteen days. There was an initial increase in the discharge, followed by a gradual decrease. Acute mastoiditis did not develop in any case after the initiation of roentgen treatment. Mastoiditis was present in nine cases when radiation was started. Seven patients recovered without operation and two were operated upon. In a parallel series of twenty-five unirradiated acute and chronic cases, mastoiditis developed in nine and mastoidectomy was performed in five.

The chronic cough occurring during childhood represents another troublesome clinical problem amenable to x-ray therapy. Liebman<sup>17</sup> of Montreal, since 1924 has used it in 700 children in whom other therapeutic procedures were not successful. He concludes that treatment was most favorable in cough as an aftermath of pertussis or subsequent to other infections of the upper respiratory tract and eighty were definitely relieved of cough. In a separate series of seventy-seven cases, even better results were obtained. In about fifty per cent of all cases there was a definite exacerbation of the cough following the first and second treatment, its duration rarely exceeding forty-eight hours. To compare the effects of one form of radiation with another, ten children were treated with ultraviolet light but the results with roentgen radiation were so much better that ultraviolet treatment was abandoned. It was emphasized by the author that no child with a chronic or persistent cough should be treated before all etiological factors had been satisfactorily eliminated. It is the general conception that these otherwise unex-

plained coughs are the result of hilar adenopathy, perhaps producing mechanical pressure at the root lung not readily demonstrable radiographically. Frequently, the chronic cough is a part of broncho-sinusitis and roentgen irradiation of the sinuses may successfully control paroxysms.

Rathbone<sup>31</sup> cites his results in treated seventy cases of chronic sinus disease in children with roentgen therapy. In this group, fifty-seven per cent were cured, twenty-eight per cent showed improvement and fifteen per cent were not benefited by the treatment. The criterion of cure was a complete disappearance of all evidence of sinus disease from a clinical and roentgen standpoint. The patients receiving the most benefit from roentgen therapy were the children with a diffuse lymphoid hyperplasia throughout the nose and throat.

Enlarged glands and swollen lymphoid tissue at the hiluses are reduced in exactly the same manner as occurs with great uniformity in other adenopathies of a similar character. In the treatment of pertussis, we believe that roentgen therapy should be regarded as an adjunct to the usual measures and may be tried in any case in which the paroxysms are unduly severe or persist beyond the usual duration.

The use of roentgen therapy in cases of pulmonary abscess appears reasonable. The infiltration of the lung parenchyma of an extent to choke off the pulmonary circulation producing lung gangrene, is relieved by proper roentgen therapy. Feinstein and Poppe<sup>4</sup> report the results of roentgen therapy in thirty patients with lung abscess in which recovery occurred in twenty-two and improvement in three. The patients were under observation from five months to one and one-half years. Improvement in the general condition was noted, sometimes as early as following the first exposure. On discharge, roentgen films revealed the absence of abscess or massive scar formation. These authors believe that roentgen therapy gives a high percentage of recovery and the most lasting results in recent cases of abscess of the lungs, when compared with any other methods of treatment. Porchownik<sup>27</sup> reports twenty-five cases of lung abscess which were observed from two months to two and one-half years treated by roentgen therapy and repeatedly examined radiographically for the confirmation of the recurrence of the process; when the abscess is eight months or a year old, granulation tissue and the thick walls of the abscess cavity, as well as the induration of the surrounding lung, prevents complete scarring of the focus. Only temporary improvement in this group can be expected by roentgen therapy. In the series in which the abscess had existed for a shorter period of time, results were uniformly satisfactory, requiring two or three series of x-ray treatments at intervals of five weeks.



Recently, the literature has included increasingly encouraging reports of roentgen therapy in pneumonia. As early as 1905-06 Musser and Edsall<sup>21</sup> and Edsall and Pemberton<sup>3</sup> reported the strikingly favorable improvements of small doses of x-ray therapy in four cases of delayed resolution. They reported that within twenty-four hours after exposure, resolution of the exudate had begun and proceeded rapidly. All four patients recovered without other therapeutic measures although other therapeutic measures had previously failed to improve the pulmonary condition. Since then, the observation has been repeatedly confirmed by Heidenhain and Fried<sup>7</sup>, Holzknect<sup>11</sup>, Merritt and McPeak<sup>19</sup> and others report their observations of favorable action on postoperative pneumonia as well as pneumonia unrelated to surgery. In all instances, the best results were obtained when roentgen therapy was employed early in the course of the disease. Those patients referred when in extremis have not, as would be expected, reacted in a startling manner. More recently, instances of the use of x-ray therapy in lobar pneumonia have appeared. Powell<sup>28</sup> has reported 104 cases of lobar pneumonia including Types 1, 2 and 3 pneumococci and high types of pneumococci and other bacteria, of which only five patients died. His results in the treatment of Type 1 seem to have been better when roentgen therapy was used than with serum. His report includes most conclusive evidence of frequent essential abortion of a true lobar involvement. Frequently, the temperature and the white cell count dropped to normal in from thirty-six to forty-eight hours; occasionally, the temperature was normal within twelve hours. Resolution of the pulmonary consolidation practically always lagged behind other evidence of recovery. The only contraindication which he recognized was the definite leukopenia, particularly in influenza pneumonia.

One of the most interesting recent instances of the employment of roentgen therapy is that of Robert Levy and Ross Golden<sup>16</sup> of Columbia University who reported on forty-eight patients with rheumatic heart disease treated by roentgen irradiation of the heart and who have been observed during an eleven-year period. Thirty-six of the patients are living, of whom twenty-five are regarded as improved by treatment. They concluded that a definite relationship exists between the improvement and roentgen therapy. Three cases were unimproved; in eight cases, although recovery from the immediate attack ensued, there was no reason to believe that radiation played a role. Of eight patients with cardiac pain, six obtained striking relief. The number of treatments given to an individual ranged from three to twenty-five or an average of nine; twelve patients received ten or more. Four treatments were given as a series

every two weeks, then a period of one, two or three months allowed to elapse and a series of four treatments was then repeated. Generally, the patients with low-grade activity and without signs of congestive heart failure appeared to be most benefited. In a number of patients, in bed for months with signs of smoldering rheumatic activity, evidence of the subsidence of carditis appeared soon after roentgen therapy was begun. Several, despite severely damaged and greatly enlarged hearts, have remained free from demonstrable active carditis for over ten years. Of the patients with cardiac pain, those with aortic insufficiency obtained no relief, whereas those without this valvular defect have been uniformly helped. This, they argue, was readily understandable since in aortic regurgitation with a large leak, the coronary flow is diminished and discomfort is due largely to ischemia of the myocardium. When the pain is due to rheumatic lesions in the heart muscle, altered reaction of the cardiac tissues may bring about their dispersion. They conclude that roentgen irradiation of the heart, in the present stage of knowledge concerning rheumatic fever, deserves a place as a therapeutic measure in properly selected cases of active carditis.

It is generally agreed that the employment of roentgen therapy in pulmonary tuberculosis should be reserved for slowly progressive, indurative tuberculosis in the early stages, given under the strictest conditions of observation and control. Tuberculosis of the cervical nodes is ideally managed by properly spaced series of relatively low dosage. Tubercular conjunctivitis or keratitis, as mentioned above, are rationally amenable to x-ray therapy and published reports claim the cure or improvement of the great majority. The treatment of tubercular peritonitis, as reported by Desjardins<sup>2</sup>, is followed by recovery of sixty to eighty per cent. It is the general conception that the exudative type is best treated by laparotomy and other measures, while the proliferative or adhesive type tolerate roentgen therapy unusually well and treatment quickly leads to marked improvement or ultimate cure. The effect on the tuberculosis mesenteric glands, as on the tubercular cervical glands, is uniformly good.

The diagnosis of tuberculosis of the female genital tract is difficult without exploratory laparotomy and biopsy. In some instances it is reported that diagnosis made surgically is untreated and referred for x-ray therapy, because of the high primary mortality frequently the result of exacerbation of other foci in the body. A large number of authors have shown the uniformly satisfactory results following the roentgen treatment of proven tubercular adenexial disease.

Regarding the irradiation of pelvic inflammatory disease, particularly that following abortions, obstet-

rical complications and pelvic operations, roentgen therapy has much to offer. Heidenhain and Fried<sup>8</sup> used small doses of roentgen therapy in coccic suppurations and are enthusiastic with the results. Holzknecht<sup>11</sup> states that his findings agree with Heidenhain and Fried. "In about one-third of the cases the process was shortened, often to a very small, hitherto unrecorded fraction of the usual duration of illness. In another one-third of the cases, the disease picture disappeared in from twenty-four to forty-eight hours practically by crisis. Fair improvement or complete failure occurred in the remaining one-third of the cases". It is generally agreed that gonorrheal infections are best handled after the quiescence of acute exacerbation by pure surgical measures. One-third of the cases reported by Holzknecht were shown to be largely of this classification.

Acute inflammatory disease of the gastrointestinal tract or of the abdomen is usually not considered as amenable to roentgen therapy. Success in the handling of other inflammatory processes might suggest the employment of roentgen therapy in acute or subacute appendicitis. However, it is the general conception that such experimentation is not warranted; that it is entirely too difficult to evaluate the extent of the acute inflammatory disease within the abdomen or to determine in any manner how imminent perforation and its subsequent danger of peritonitis may be.

More recently roentgen therapy of generalized peritonitis, particularly postoperative peritonitis, has been attempted. The development of the bedside unit will make this type of therapy easier to carry out. At the present time, however, the reports are inconclusive. Theoretically, there should be no objection to small doses of roentgen therapy over the abdomen in generalizing peritonitis.

The most prominent feature following roentgen therapy of inflammatory processes is the alleviation of pain which has lead to its employment in a variety of inflammatory lesions, as arthritis, neuritis, neuralgia, bursitis, herpes zoster, tic dolooureux, sciatica and other specific types of neuritides. Again, our most impressive results have followed the employment of roentgen therapy in the treatment of physicians who have suffered one or more of the above inflammatory processes.

Roentgen therapy has been employed in epidemic types of cerebrospinal meningitis. Koehler<sup>14</sup> reports two cases; Mori and Nakanota<sup>20</sup> report four cases; Hippe and Gruninger<sup>9</sup> report two cases; Schule<sup>32</sup> reports seven cases and several other authors refer to its employment without citing a definite number of cases. In all reports both the brain and the spinal cord were irradiated in small doses, treatment usually given daily until improvement occurred, then the in-

terval was increased to two or more days. Almost invariably the reports indicate that improvement promptly followed institution of irradiation. The Nonne became weaker, stiffness of the neck and Kernig's sign became less positive, headaches disappeared, sleep and appetite returned. The experience is not wide enough to qualify the delimitation of the therapeutic effort to roentgen therapy alone although several of the cases reported received no other treatment or the treatment was instituted after routine medical management had clinically failed.

Finally, the employment of roentgen therapy in the treatment of gas gangrene demands mention. Kelly and McDowell (12) of Omaha are the authors of the statement that amputation is no longer required. Fifty-six cases of proven gas gangrene are reported by them with a mortality rate of 8.9 per cent. They emphasize that treatment should be begun early as a prophylactic when the disease is suspected. They are unwilling that serum therapy be omitted when roentgen therapy is employed, but doubt its requirement. They emphasize the importance of the administration of antitetanus serum and local surgical antiseptics.

It seems, therefore, that the value of roentgen therapy has been thoroughly proven and is recognized by the informed physician and surgeon as a potent ally in the management of various types of inflammatory disease. If the literature on any subject is to be given its full measure of credence, then a wider employment of radiation therapy may be expected to follow soon.

## BIBLIOGRAPHY

1. Allen, M. Lowry, *Surgery, Gynecology and Obstetrics*, October, 1938, Vol. 67, No. 4, 393-399.
2. Desjardins, A. U. *Radiology*, October, 1937, Vol. 29, 437.
3. Edsall, D. L. and Pemberton, Ralph, quoted by Desjardins (2).
4. Feinstein, D. A. and Poppe, E. P., quoted by Allen (1).
5. Hall, Wendell C., *American Journal of Roentgenology*, March, 1938, Vol. 39, 393-396.
6. Hancken, W., 1936 Year Book of Radiology, Year Book Publishers, Inc., Chicago, Illinois, page 477.
7. Heidenhain, L., and Fried, C., quoted by Desjardins (2).
8. Heidenhain, L., and Fried, C., quoted by Pohle (25), page 247.
9. Hippe, H. and Gruninger, U., 1936 Year Book of Radiology, Year Book Publishers, Inc., Chicago, Illinois, page 437.
10. Hodges, F. M., and Berger, R. A., *Journal of the American Medical Association*, 1936, Vol. 107, 1551.
11. Holzknecht, G., *American Journal of Roentgenology*, 1926, Vol. 15, 332.
12. Kelly, J. F. and Dowell, D. A., *Journal of the American Medical Association*, 1936, 107, 1114.
13. Knupfer, H. and Hummer, R. quoted by Allen (1).
14. Koehler, G. D., 1936 Year Book of Radiology, Year Book Publishers, Chicago, Ill., page 438.
15. Lafranchi, Jackson County Medical Society Weekly Bulletin, Vol. 32, October 15, 1938, No. 42, 929.
16. Levy, Robert and Golden, Ross, *American Journal of Sciences*, November, 1937, Vol. 194, 597-601.
17. Liebman, Charles, 1937 Year Book of Radiology, Year Book Publishers, Chicago, Illinois, page 339.
18. Lucinian, J. H., *American Journal Roentgenology*, January, 1936, Vol. 35, 55.
19. Merriitt, E. A. and McPeak, E. M., *American Journal of Roentgenology*, January, 1930, Vol. 23, 45-48.
20. Mori, S. and Nakamoto, H., 1936 Year Book of Radiology, Year Book Publishers, Chicago, Ill., page 438.
21. Musser, J. H. and Edsall, D. L., quoted by Desjardins (2).
22. O'Brien, F. W., *Radiology*, January 1937, Vol. 28, 1-4.
23. Pendergrass, E. P. and Andrews, J. R., *American Journal of Roentgenology*, November, 1935, Vol. 34, 637-640.



24. Pfahler, G. E. and Kapo, P. J., *American Journal of Roentgenology*, 1934, Vol. 32, 293.
25. Pohle, E. A. *Clinical Roentgen Therapy*, Lea and Febiger, Philadelphia, Pa., 1938, 128.
26. Pohle, see 25, page 129.
27. Porchownik, J. B., 1936 *Year Book of Radiology*, Year Book Publishers, Chicago, Ill. 507.
28. Powell, E. V., *Texas State Medical Journal*, 1936, Vol. 32, 237.
29. Torres-Carreras, R. and Sola, P. B., 1936 *Year Book of Radiology*, Year Book Publishers, Inc., Chicago, Ill., 487.
30. Rankin, F. W. and Palmer, B. M. quoted by Desjardins (2).
31. Rathbone, R. R., *American Journal of Roentgenology*, 1937, Vol. 38, 102.
32. Schule, H., 1937 *Year Book of Radiology*, Year Book Publishers, Chicago, Ill., 388.

## ACID THERAPY FOR JUVENILE PYELITIS\*

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Many of you will remember the earlier unsatisfactory treatment of children suffering from pyuria. Pyuria is usually known as pyelitis, but this is only a clinical characterization. Within the past three years in this country, therapeutic agents have been found which are practical and prove bactericidal for many urinary infections. These remedies have been well tolerated and are administered on a more scientific basis than any of the others previously employed.

For several years alkalinization with drugs such as sodium citrate was commonly used. It may be that we will continue to treat certain cases, especially simple acute ones, by alkalinization, which method depends largely upon a diuretic action. But even when the common urinary disinfectant, urotropin, was the accepted method of treatment, it was found to be ineffective when the urine remained alkaline. It now seems significant that we combined with the urotropin what we thought was an acid-producing drug as an adjuvant, namely acid sodium phosphate. This is not a reliable nor the best acidifier, and one may use ammonium chloride or ammonium nitrate in preference. The development of the acid types of therapy has been slow but consistently steady.

The observation was made, accidental at first, confirmed later, that certain urine, standing for days such as in the laboratory, had remained sterile. This urine had been voided by patients who had been on a high fat—low carbohydrate diet. The explanation was that such urine contained acid-ketone bodies which had a bactericidal or a bacteriostatic action, at least for certain organisms, especially the colon bacillus. Helmholz who has introduced much of the

scientific study and treatment of pyelitis, found that acid urine is most bactericidal when kept at a concentration of 5.3 pH or less. The ketogenic diet<sup>1</sup> proved impractical for most children, since it is disliked, cannot be continued indefinitely, becomes tiresome, even produces vomiting, and thus makes difficult the maintenance of urine acidity at a constant optimal degree. The low sugar content of a ketogenic diet robs the child of adequate carbohydrates necessary in the physiology of early life.

Chronic or recurrent attacks of pyuria are apt to be due to stasis resulting from congenital narrowing or obstruction of the lumen of the ureter; to a diverticulum of the bladder, or some other type of malformation. Persistent pyuria accompanies calculus. Acid treatment has been more effective in such types of pyuria than any other palliative measure. Of course surgical cure of a stenosis or diverticulum is essential in the long run.

For several years I have been interested in the practical possibility of maintaining a highly acid urine through the simple method of adding a few simple acid-producing articles to an ordinary diet. In this way the child could have plenty of meat with some fat; as much cream, butter, bacon, olive oil and peanut butter as the child willingly takes; the urine could then be more completely acidified by adequate doses of ammonium chloride, and by certain fruits and their juices. The three fruits best known as acidifiers are plums, cranberries, and prunes. During this diet it is advisable for the short periods of the treatment to leave out of the menu all citrus fruits, and grape juice, for these have an alkaline ash and produce a highly alkaline urine.

### MANDELIC ACID

In 1936, at a meeting of the American Pediatric Society, Helmholz reported his experience at the Mayo Clinic with the drug suggested by Rosenheim of England. This chemical had been known as a constituent of oil of bitter almonds and also of homatropine. Its merit as a drug in pyuria consists of its persistence, in an unoxidized state after it reaches the urinary tract, uncombined and still as mandelic acid. It was selected because of its similarity in behavior to one of the ketone bodies, namely beta-oxybutyric acid.

Mandelic acid is available in several preparations, as an ammonium salt commonly offered in a vehicle of syrup. Most of these are unpleasant to the taste. I have experimented with the aid of a pharmacist to find a vehicle which does away with objectionable taste. With the usual elixir, the addition of sufficient syrup as suggested below makes it an easy way to administer the liquid preparations. When a child

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can swallow medicine in tablet form, it is not objectionable.

Cure is usually rapid and spectacular, both in acute and in many chronic cases. The safe guards and limitations of mandelic acid administration are: the fluid intake of the child should be considerably less than 1200 cc in twenty-four hours, and such deprivation of water must not be advised when there is high fever accompanied by dehydration; the functions of the kidney must be normal, enough to permit the excretion of sufficient acid phosphate to prevent throwing the child into acidosis.

Suggested Total Amounts<sup>2</sup> in Twenty-four Hours.

Ammonium mandelate	Fluid Intake
Birth to 6 months 30—45 grains	1 pint
Six to 24 months 45—60 grains	18 oz.
Two to five years 60—90 grains	22 oz.
Later childhood 90—120 grains	27 oz. to 1 qt.

The twenty-four quantity may be divided into four doses, one every six hours, or into six doses, one every four hours. A standard elixir contains 124 grains of the drug to the ounce. One dram of this would therefore contain fifteen grains. The amount of the preparation for the individual child at the various ages is therefore easily computed. The author suggests that when the dose is measured out and placed in a medicine glass that an equal or even double amount of syrup or molasses be added to the medicine in the glass. This syrup may be corn, sorghum, licorice, raspberry, or wild cherry as desired.

The duration of one treatment period with mandelic acid is 6 to 12 days. Then a microscopic and cultural examination of the urine is to be made for determination of pus and microorganisms. If still positive or a relapse should occur, another course is given. Mandelic acid is not advised in severe renal damage, as acidosis may result, the drug being irritant to the already damaged kidney. In some instances the kidneys may not be able to excrete mandelic acid in the concentration necessary for bactericidal effect.

I would like to cite four types of cases treated recently:

1—Pyelitis in the Newborn—On the second day of life this boy had fever, which was accompanied by 140 pus cells in the cmm of centrifuged urine. As beginning treatment fluids were forced by mouth, and salt solution by clysis. The kidneys sometimes need to be flushed out in such cases in the first few days of life, because of uric acid infarction. This infant recovered by the establishment of diuresis alone, and so rapidly that no drug therapy was needed.

2—Relapse of Pyelitis—Betty Ann, age two years. Septic fever, colon bacillus, and as many as 200 pus cells per cmm in the urine for first seven days. Elixir

of mandelic acid (drams ii) was begun. Ammonium nitrate grain v (5) was added to make the urine more acid. Both drugs were given at four-hour intervals day and night. The pH of the urine dropped from alkaline 8.6 before treatment to acid 5.1 within a day and remained there during the treatment. On the ninth day the pus cells had entirely disappeared within two days. Within a week the culture gave no growth of *B. Coli*.

3—This was a chronic case. This unfortunate little girl was born with an imperforate anus; a vaginal fecal fistula had been operated upon, and an artificial opening made in the perineum connected with the colon. Several months later through fecal contamination of the urethral meatus, there developed a severe pyuria, the organism found to be colon bacillus. The child entered the hospital prostrated by the infection and dehydrated by high fever. Clysis of salt solution and two and one-half per cent glucose was given at once. Sulfanilamide was not well tolerated nor effective. We then administered mandelic acid as syrup of mandelate, one teaspoonful four times in twenty-four hours. At the beginning of this treatment there were 16,000 pus cells per cmm. of urine; on dismissal at tenth day, there were ten or twelve cells per high power field. She has been free of infection for months.

4—Katherine S., age nine years. She had been having recurrent attacks of pyelitis since three years of age. An alkaline producing diet was ineffective. An attack beginning May 12, 1937, was treated with tablets of ammonium mandelate seven and one-half grains each, taking two at a dose four times a day for the first day; three at a dose four times a day for the second day. Then four tablets four times a day from then on. She was given also acid producing juices. In seventeen days the urine was entirely free of pus. There was another attack in 1938. At that time we gave the elixir of mandelic acid, one teaspoon four times daily with cranberry juice. The urine became clear in seven days, and it was still free of organisms and cells two weeks later.

#### SUMMARY

It can be said that formerly many acute cases had not been followed through to the stage of negative culture. Relapses were common. Thorough treatment of acute cases with remedies now available will result in the reduced incidence of chronic pyelitis in children.

All acute simple cases may be treated if desired by mandelic acid. Severe pathological changes in the kidney which interfere with excretory function and cases with high blood pressure due to nephritis, are contraindicated to heroic use of acid therapy, because of danger of acidosis.



Cases during high fever do not stand such water deprivation as is necessary for the concentration of the acid in the urinary tract.

It is suggested that the simple method of checking the pH of the urine be used daily by all physicians during the treatment of such a case, in order that the best and most rapid results may be obtained.

The evolution of therapy in pyogenic infections of the urinary tract has brought about one of the greatest advances seen in modern medicine. There are various methods of acid therapy, but mandelic acid offers the best in most cases. Present treatment of pyelitis is comparable to the results offered by insulin and sulfanilamide in their fields.

#### BIBLIOGRAPHY

1. Under well-controlled conditions the diet may be of much use as reported by Rector and Wheeler, "Ketogenic Diet in Chronic Pyuria," *N. Eng. Jour. of Med.*, 211, 143, July 1934.
2. Such doses as these were used by Newns and Wilson of England.

## ADULT AND CONGENITAL PYLORIC STENOSIS\*

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This paper will deal with pyloric stenosis in the adult and pyloric stenosis of congenital origin.

It is well to think of the alimentary canal as a continuous patent tube open at each end. Along this open tube are located various places of functional and physiological importance. The function of the alimentary canal is to render food available for use. There are only a few substances such as oxygen, water, dextrose and inorganic salts which do not have to be changed for utilization. Hence it is logical to say that any discussion of the alimentary canal involves the study of food chemistry in its relation to health and disease.

Historically, according to Osler<sup>1</sup>, Beardsley in 1788, first described pyloric stenosis. Landerer of Freiberg, in 1879, studied in detail and reported ten cases. Maier<sup>2</sup>, in 1885, reported thirty-one cases of autopsy with age limits of twelve to seventy-five years. Perhaps he was the first to recognize primary pyloric stenosis in adults and he believed them to be of congenital origin. Cruvielhier, in 1835, recognized a case of benign pyloric stenosis in a woman of advanced years and autopsy confirmed his diagnosis. In 1902, Meinal<sup>3</sup> observed a case of adult pyloric stenosis and was so proven histologically. In 1917, Urrutia<sup>4</sup>, described one case of benign adult pyloric stenosis and in 1920, Maylord<sup>5</sup> described seven cases

operated on for symptoms similar to gastric ulcer and found pyloric stenosis. Bastianelli<sup>6</sup>, in 1925, describes four cases of adult stenosis found on exploratory operation and relieved by surgery. Bianchetti<sup>7</sup>, in 1926, Crobin<sup>8</sup> 1928, Chaney<sup>9</sup>, in the same year report cases of hypertrophy of circular muscles of the pylorus relieved by surgery and diagnosed as non-malignant by histological studies. Martin and Burden<sup>10</sup> in 1928, reported numerous cases of adult pyloric stenosis which simulated early stage peptic ulcer. Judd and Thompson<sup>11</sup> between 1920 and 1930, reported several cases. The Mayo Clinic<sup>12</sup>, in 1933, report twenty cases proven at operation and having ages from twenty-three to sixty-four and symptoms from one to forty-two years. It is seen from these reported cases that adult benign pyloric stenosis is not very infrequent.

Diagnosis of adult benign pyloric stenosis is usually difficult. It is frequently associated with other diseases. Kirklin and Harris<sup>13</sup>, of the Mayo Clinic studied a series of eighty-one cases and found fifty of these had associated diseases. Ten had duodenal ulcer; four, ulcer and duodenitis; two with ulcer and cholecystitis with stones; five with duodenitis, only twelve with gastric ulcer; one with gastric carcinoma; seven with chronic cholecystitis and cholelithiasis, three with chronic cholecystitis only and five with subacute or chronic appendicitis. The difficulty of diagnosis of benign pyloric stenosis per se is therefore quite apparent. There is usually a long history of dyspepsia with dietary measures and a prolonged symptom complex. Careful study of radiography will help considerably. McNamee<sup>14</sup> has found several important roentgenographic findings which are: (1) Concentric and elongated pyloric canal, the length of a normal canal usually does not exceed one cm. (2) Widening of the pyloric sulcus i.e., the space between the stomach and duodenum. (3) Constant unchanged appearance of the pylorus which is not affected by manipulation or medication.

The differential diagnosis includes (1) ulcers healed and active, (2) pyloric carcinoma, (3) pyloric spasms, (4) gall bladder pathology, (5) syphilitic lesions, (6) appendix pathology and maybe (7) functional or physiological conditions.

The gastric acidity is greatly increased in pyloric stenosis. Regurgitation of alkaline duodenal content has been proven by Mathews and Dragstedt<sup>15</sup>, as the sole neutralizer of the gastric contents. Experimental pyloric stenosis in dogs as shown by Elman and Eckert<sup>16</sup>, leads to spontaneous high gastric acidity interfering with normal neutralization of the acid through reflex duodenal mechanism.

There is no satisfactory known etiology. The most satisfactory explanation is that adult benign pyloric

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stenosis is due to some congenital condition activated by some cause in adult life. Bruce Morton<sup>17</sup> explains an abnormal nervous stimulus or abnormal responses to nerve stimuli causing spasm which long continued could produce hypertrophy. This imbalance of the autonomic nervous system leading to spasticity of the duodenum has never been proven.

Schafer<sup>18</sup> found that when adrenalin was injected into the supra-renal vein there occurred a spasm of the pylorus. This leads to the formation of the endocrine theory of hyper-adrenalism. Embryologically at the end of the third month, the supra-renal and pylorus become differentiated at the same time. Coincidentally the medulla is larger than the kidney and normally it diminishes in size to normal at birth or shortly thereafter. If the medulla fails to diminish there is hyper-adrenalism and this stimulus brings about hypertrophy of the pylorus with stenosis which is found predominately in the male twenty to one.

Miller and Gage<sup>19</sup> believe adult pyloric stenosis is due to abnormal development which constricts the space through which the duodenum passes under the mesenteric pedicle and the superior mesenteric artery. Whenever visceroptosis, atony, or stomach dilatation compresses the duodenum there results duodenal ileus.

There have been many cases reported in the literature of multiple cases of pyloric stenosis occurring in the same family. Trimble<sup>20</sup> in 1933, reviewed the literature in regard to hereditary causes for this condition and found twelve articles all reporting multiple cases in the same family.

The treatment of mild cases is essentially diet and medicines. Acute cases should be treated with gastric lavage preferably with a Levine nasal tube and suction. It is important to maintain the fluid balance with physiological salt solution and intravenous glucose.

In severe cases surgery is the treatment. The type of surgery depends on the type of hypertrophy. When the lesion is a tumor with a hard cartilaginous consistency posterior gastro-enterostomy may provide relief. If the hypertrophy is a ring shaped constriction it is necessary to perform some type of plastic operation; to resect the pylorus or perform the Fredet-Rammstedt operation. Most surgeons feel this latter type in adult pyloric stenosis alone has not been successful.

#### CONGENITAL PYLORIC STENOSIS

The most plausible etiology of congenital pyloric stenosis is a development hyperplasia. Donovan<sup>21,22</sup> in a series of 119 consecutive cases had two premature seven months old babies with well developed pyloric tumors which he reported in 1932. Since then he has had an additional 143 cases which he

reported in the August 21, 1937, issue of the Journal of the American Medical Association.

This developmental hyperplasia is believed to be brought about by an anomaly in which the duodenum passes under the mesenteric pedicle and the superior mesenteric artery. This idea is much debated and has not been confirmed<sup>23</sup>.

Congenital bands originating on the under surface of the liver and corresponding to the hepato-duodenal ligament called trans-duodenal bands; can cause constriction and adhesions. If these bands persist they can cause hypertrophic stenosis of the duodenum<sup>24</sup>. Four cases have been reported from the Jefferson Hospital, Philadelphia, Department of Obstetrics.

Another suggested cause in the more chronic stenosis is diseases of the mesentery and mesenteric glands which produces compression on the duodenum.

Birth injuries of the central nervous system and association of pyloric stenosis with megalo-ureter and Hirschsprung's Disease have been rather definitely ruled out<sup>25</sup>. There is no racial predisposition and it occurs most often in the first born. There is a frequent vitamin deficiency. Phimosi was advanced at one time as having a part in its production. A review of the literature<sup>26</sup> between 1919 and 1930, shows no proven relationship.

Garrett<sup>27</sup> reports in his series of cases that stenosis predominates in the breast fed and eight to one in males. He also had three cases in negro babies. It is interesting to note that he reports cases with pyloric stenosis also having hypertrophy of the stomach muscles and the lower end of the oesophagus.

Thus we see the etiology of congenital pyloric stenosis is obscure.

The symptoms are not usually marked before the second or third week of life. There are five major symptoms and signs in pyloric stenosis in babies. 1. Failure to gain in the absence of other causes as diet, fevers and infections, etc. 2. Persistent projectile type of vomiting immediately after eating and the vomitus not bile stained. 3. Visible gastric peristalsis from left to right and gastric retention. 4. Scanty stools. 5. Palpable tumor mass about the size of a large olive where the peristaltic wave ends.

There is usually a scanty urine, malnutrition, loss of chlorides due to vomiting of HCl and possible a resulting alkalosis. There is little pain and hic-cough. The stools may be fatty according to Abt<sup>28</sup> due to vomited bile. Most authorities believe the stenosis prevents bile entering the stomach.

Some writers lay stress on the presence of mucous in the vomitus as indicative of obstruction high up. If the stomach is greatly distended there may exist a state of paralytic distention and no visible peristaltic waves can be seen.



In pyloric stenosis with vomiting the symptoms and findings correspond to all high intestinal obstructions<sup>29</sup>. Certain blood chemistry changes<sup>30</sup> as shown at the Mayo Clinic such as high nitrogen retention, low plasma chlorides, high CO<sub>2</sub> combining power and conditions simulating an alkalosis such as albumin, casts and decrease phenolsulphonephthalein excretion.

The treatment resolves itself into only two aspects medical and surgical. In the medical treatment the chief indication is to give a diet small in volume, very nutritious and not too rich in fat and one which would pass out of the stomach as quickly as possible. A sieved mixed diet dry as can be made is best. As long an interval between feedings as possible is better. One should try to prevent fermentation by use of carminatives. Castor oil as an aperient when needed because intestinal distension seems to be caused by fat indigestion, always in vomiting there is a chemical imbalance which I shall refer to later. Gastric lavage is to restore tone to the stomach and the emptying time of the stomach can be ascertained by passage of tube at four hour intervals.

Dehydration can be combatted by hypodermoclysis of five per cent glucose in physiological salt solution. Some authors<sup>26</sup> advocate commencing treatment with glycerin enema to be repeated every four to five days as needed. Gastric lavage of Na<sub>2</sub> CO<sub>3</sub> drachm 1 to pint of boiled water two or three times a day until symptoms improve. A breast fed baby sometimes needs supplemental feedings of citrated milk at night. One half ounce of peptonized milk in one-half ounce water may be given every two hours with the stomach tube and later, on improvement, spoon feeding can be begun, followed with bottles of citrated milk. Cooked thick cereal to which lactose is added every two hours in small amounts, later vegetable puree, toast, butter and boiled milk with small amounts of fluids between feedings.

The following formulas have been used:

1. Pumped breast milk  
Milk oz. 12  
Barley flour 3 level T.  
Dextri-maltose 3 level T.
2. Evaporated milk  
Milk ozs. 6  
Water ozs. 8  
Dextri-maltose 3 level T.
3. Skimmed milk  
Milk ozs. 10  
Water ozs. 10  
Farina 6 level T.  
Barley water 3 level T.  
Dextri-maltose 3 level T.

In making up the above, mix to a smooth paste, bring to a boil and cook in covered double boiler

for half hour or until mixture has the consistency of whipped cream. The total volume should be from eight to ten ounces and have caloric value of about fifty per ounce. The first week one should feed one ounce seven times in twenty-four hours for an infant of seven pounds weight. At the completion of each feeding one ounce of tepid water should be given. A retention enema of five per cent glucose in normal saline or ringers solution is given with a No. 14 F. catheter. If ineffective this can be given as hypodermoclysis.

Drugs familiar to all of us are atropine sulphate 1 to 1000 solution with feedings, tincture opium M 1 with bismuth gr. 5, at six hour intervals, tincture belladonna M 3, paragoric M 2, and Na<sub>2</sub> CO<sub>3</sub> gr. 3, at six hour intervals for diarrhea and green stools. If after a reasonable trial when feedings of proper formulas and medications fail operative procedure should not be delayed. The average time is about forty-eight hours and then the pre-operative regime which I shall discuss very shortly should be followed.

Most authors agree that surgery is the method of treatment not only to relieve the infant but to prevent adult pyloric stenosis. Much depends on pre-operative preparation of the infant and since most cases are not immediately urgent one has time to get the patient in the best possible condition. Of course early diagnosis is imperative. Vomiting has caused loss of chlorides from the blood and there may result alkalosis<sup>30</sup>. Starvation has caused depletion of glycogen reserve in the body resulting in ketosis. Hypodermoclysis and intravenous ten per cent glucose are very valuable. Blood transfusions ten cc for each pound of weight and in the extremely cachectic twenty cc per pound can be given. Four hours before surgery nothing is given by mouth and one and one-half hours before the operation the stomach should be washed out. The use of Na<sub>2</sub> CO<sub>3</sub> to lavage the stomach has been condemned prior to surgery on the grounds there is already an alkalosis due to loss of chlorides and HCl in vomiting<sup>30</sup>.

After the operation the baby's head should be lowered until recovery from the anesthetic, to prevent aspiration of mucous. Two hours after operation fifteen cc of H<sub>2</sub> O should be given by a dropper. Four hours after operation four cc of breast milk with four cc barley water are given. This is increased five to ten cc every three hours, feeding until thirty cc is being taken at the end of forty-eight hours. After this increase by five to ten cc daily until total caloric requirement is met. For the first five days all feedings are given by dropper and on the sixth day the baby can be put to the breast once, then seventh day twice and so on until baby is back on the breast. The infant should get three

ounces fluid per pound body weight in twenty-four hours. Authorities agree that breast milk is the one of choice but when this is unavailable other suitable formulas can be used. One should always bear in mind that small amounts of food highly concentrated, rich in calories given at properly spaced intervals is the proper method.

The Fredet-Rammstedt operation is the type found most universally successful and the technique is well known. This longitudinal muscle cutting and separation from the mucosa was discovered by accident. Rammstedt operating on a patient found that during the course of the operation his patient suddenly went into shock and the operation was discontinued after only the muscles were cut. The incision was closed and much to his surprise the patient had a very uneventful recovery. Since then this type of operation has gained wide use and time has proven that on small infants nothing more extensive is necessary. The salient features of this operation is to leave the mucosa intact. The pyloric incision is made in the "bloodless area" or the upper part of the pylorus. All hemorrhage should be stopped and shock reduced to a minimum. It is not at all unusual for a skillful operator to do this operation in fifteen to twenty minutes. It is well to remember that the muscle fibres at the duodenal end of the hypertrophied pylorus are very thin and the mucosa can be easily perforated. If perforation of the mucosa happens a single silk suture usually suffices to close and prevents peritonitis. The mortality rates between 1915 to 1923 were about ten per cent. At present the rates are two to four per cent in most hospitals. This I believe is due to better understanding of proper pre-operative preparation and the use of the simple muscle splitting, separation from the mucosa operation. In infants gastro-enterostomy is practically never used since the Rammstedt operation has become popular.

#### CONCLUSION

Adult pyloric stenosis per se is a definite entity, frequently associated with other conditions and most often some form of plastic and gastro-enterostomy surgery is necessary.

In congenital pyloric stenosis there is usually a developmental hyperplasia, one surgeon finding it in premature seven month old baby. There are five major symptoms and signs and there is usually a disturbed imbalance of the blood plasma. Most often surgical interference with a simple Fredet-Rammstedt muscle splitting operation is all that is necessary. The mortality rate depends to a large extent on pre-operative preparation. Surgery should not be delayed too long, forty-eight hours in most cases after the diagnosis is made. Suggested formulas and post-operative treatment have been discussed.

#### BIBLIOGRAPHY

1. Osler; Principles and Practice of Medicine; D. Appleton Co.
2. Maier, R.; Beitrage sur Angeborenen Pyloric Stenosis Virchow; Archives of Pathology and Anatomy, 102:413, 1885.
3. Meinal, A.; Beitr sur Path; Anat u z Allg. Path., 31:478, 1902.
4. Urrutia, L. A.; Arch. d Mal de l'app Digestif, 9:333, 1917.
5. Maylord, A. E.; Conj. Narrowness of the Pyloric Orifice a Cause of Gastric Disease in Adult Life, British Medical Journal, 1:416, 1904 and 1920.
6. Bastianelli, R.; Pyloric Spasm and Its Surgical Relief; American Surgery, 81:145, 1925.
7. Bianchetti, C. F.; Contributo Allo Studio Della Stenosi Pilonica Iperτροφica Idiopatica dell'adulto; Arch f Ital di Chir, 15:585, 1926.
8. Crobin, B. B.; Conj. Pyloric Stenosis in Adult Life; Journal American Medical Association, 90:197, January 21, 1928.
9. Chaney, R. H.; Conj. Pyloric Stenosis in Adult Life; Journal Medical Association, Georgia, 17:57, 1928.
10. Martin & Burden; Pyloric Achalasia and Peptic Ulcers; American Surgery, 88:565, 1938.
11. Judd & Thompson; Hypertrophic Stenosis of the Pylorus in Adults; Surgical Clinics North America, 1920-30.
12. Proc. Staff Mayo Clinic, August 13, 1933.
13. Kirklin, B. R. and Harris, M. T.; Hypertrophy of the Pyloric Muscle in Adults; American Journal Roentgenography and Radium Therapy, 29:437:442, April 1933.
14. McNamnee E. E.; Pyloric Stenosis with Hypertrophy of the Pyloric Muscle in Adults; American Journal Roentgenology and Radium Therapy, 29:249, January 1922.
15. Mathews, W. B. and Dragstedt, L. R.; Surgery, Gynecology and Obstetrics, 55:265, 1932.
16. Elman, Robt. and Eckert, C. T.; Gastric Acidity as Influenced by Pyloric Closure and Stenosis; Archives of Surgery, 29:1001-13, December 1934.
17. Morton, Chas., Bruce; Hypertonicity and Hypertrophy of the Pylorus in Adults; Archives of Surgery 20:508, March 1930.
18. Chaney, Ralph M.; Georgia Medical Assn., 28th Annual Session, May 12, 1927.
19. Miller & Gage; Gastromegaly and Chronic Duodenal Ileus in Children; Archives of Diseases Childhood, 5:83-132, Apr. 1930.
20. Trimble; Congenital Stenosis of the Pylorus; Journal American Medical Association, 101:278, July 22, 1933.
21. Donovan, Ed. J.; Congenital Hypertrophic Pyloric Stenosis in Infancy; Annals of Surgery, February 1932.
22. Donovan, Ed. J.; Journal American Medical Association, 109:558-60, August 21, 1937.
23. Miller R. and Gage, H. C.; Archives of Diseases Childhood, 5:83, April 1930.
24. Burt, Edw. F. and Tyson, Ralph M.; Duodenal Obstruction Caused by Congenital Bands and Adhesions Simulating Congenital Hypertrophic Pyloric Stenosis; American Journal of Disease Children, 41: 1403-10, June, 1931.
25. Thomas, L. H. and Mahoney P. J.; Congenital Hypertrophic Stenosis of the Pylorus. A study of 425 cases treated by Pyloromyotomy; Surgery, Gynecology and Obstetrics, 56:205-9, February 1933.
26. Cameron, McLeod and Lond; Infantile Hypertrophic Pyloric Stenosis; Lancet, September 5, 1931, page 526-29.
27. Garrett, B. C.; Cong. Hypertrophic Pyloric Stenosis; Southern Medical Journal, 28:450-2, May 1935.
28. Abt, I. A.; Pediatrics; W. B. Saunders, 1924, page 506.
29. McVicar, C. S.; American Journal Medical Societies, 1926.
30. Brown, Eustermann, Hartman and Roundtree; Archives Internal Medicine, 32:425-55, 1923.
31. Maigels, M., McArthur, C. B., and Payne, W. W.; Alkalosis in Pyloric Stenosis of Infants; Lancet, 1930, page 286.
31. Long, LeRoy, Downing; Southern Medical Journal, 26:350-53, April, 1933.

## THE RELATION OF BACTERIAL ALLERGY TO OTHER ALLERGIC CONDITIONS

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The idea of there being a distinct relationship between bacteria and states of anaphylaxis is not new. In 1907 Rosenau and Anderson showed that a definite anaphylaxis could be experimentally established by bacteria. This has been corroborated repeatedly by Krause and Doer, Holobut and Zinser, Parker and others.

The manifestations of the hypersensitive state to bacteria as shown by the skin reaction is not of the



type such as seen to be produced by other and more orthodox antigens as inhalants, pollens, foods, etc. The dermal reaction to the bacterial antigen is slow of formation and the wheal with pseudopodia and extensive area of erythema is far more apt to be the exception than the rule. This very characteristic was for a time and still is to some extent, perhaps a deterrent to the acceptance of bacteria into the society of classical allergens.

In 1917 subsequent to and backed by the work of Goodale, I. S. Walker popularized the scratch method of testing suspected persons with the proteins derived from bacteria. In some instances reactions were obtained of both immediate and delayed type. These reactions were credited with the same significance as those obtained with common food and inhalant atopen extracts. This report was enthusiastic and drew a considerable amount of criticism.

Walker's work was analysed by R. A. Cooke whose criticism of it is quoted.

"The work has not brought forth any proof to show that his so-called positive reaction with bacterial proteins, as used by him in asthmatics, has any bearing upon the bronchial condition or is etiologically diagnostic in any individual case cited. He has only shown that asthmatics treated with a vaccine were relieved, irrespective of the reaction obtained with bacterial protein. His published results must be due to what may be considered as a non-specific effect obtained by vaccine."

Cooke working with a series of 50 cases could not confirm the work of Walker with preparations of bacterial proteins made according to Walker's own technic. In the series only two reactions were obtained and in neither of these patients could the organism giving the reaction be isolated from the respiratory tract nor could immediate constitutional reactions be induced in those or in similar cases by the subcutaneous injection of the bacterial protein giving the original reaction.

In 1920 F. M. Rackermann introduced the intracutaneous method of testing with bacterial vaccine. He was able to produce immediate and delayed reactions which he at the time thought to be specific. Later Rackermann, because his positive intracutaneous reactions were so frequent, recommended the subcutaneous use of diagnostic vaccines and the reading of the results on the basis of the delayed reactions which he considered at the time more satisfactory.

By this time Walker had become less enthusiastic about his bacterial protein preparations and had admitted their uselessness but agreed that the use of killed organisms were worthy of consideration.

In human beings allergic manifestations accompanied by immediate skin reactions to bacteria rare-

ly occurs. However reactions do occur being usually of the delayed type as reported by Koch for tuberculin. These are known as tuberculin or tuberculin like reactions. The reason for these reactions is not clearly understood. For many years it was thought and indeed seems quite logical now as any thing presented to date, that such allergy is possibly due to the constant action of the antigenic substance arising from infection in the body. Zinzer suggested that bacterial allergy might be due to hypersensitiveness to the nucleoproteins arising from bacteria as they produce tissue inflammation. What ever the mechanism is which produces this allergic state and how it operates will be discussed no further except to state that the passive transfer or the Prausnitz Kustner reaction can not be demonstrated as in the usual atopic states. This Zinzer suggests is due to the fact that the antibodies are not thrown off in the blood but are possibly fixed to the sensitized cells or tissue and therefore not available in the individuals serum in sufficient amounts to produce passive sensitization.

It is my belief and substantiated by a large number of careful observers (and denied or minimized by others) that bacterial allergy does present a very important problem. The probability of bacterial allergy can not be denied even by the least enthusiastic. Alexander says the subject of "bacterial allergy is just beginning to be investigated and may be the allergy of tomorrow".

The study of bacterial allergy brings up a problem which is unique as compared to the usually considered type of hypersensitization. This is due to the fact that the conception must encompass not only the idea of the protein sensitivity but also the idea of immunity to infection which is the aftermath of the invasion of a particular organism. In the study of bacterial allergy we have to remember the relation of bacterial infection. This relationship has a different connotation than the relationship which exists between the atopic state that occurs between eggs and wheat or string beans and peanuts for example. Wherry has emphasized bacterial allergy and has said that inhalant allergy may predispose to bacterial allergy. Rich has stated that allergy and immunity to bacterial antigens can exist independently in contrast to the conception that allergy is the first step to immunity. This latter he apparently in no wise accepts.

It must not be thought for one moment that the case of bacterial allergy is thoroughly accepted in certain quarters. This has been said above. Rowe considers it a secondary factor and quite infrequently a primary state. Feinberg questions the importance of bacterial allergy. Numerous others are inclined to be skeptical. I believe one of the weaker grounds for

the skepticism is the fact that cleaning up the foci of infection does not in turn give immediate and permanent relief from asthma. It appears obvious on the face of this idea that there are too far reaching ramifications to accept it as an objection to the hypothesis without question. Huber and Koessel, Koessel and Lewis and Harkavy produce the argument that histamine like substances or less definitely defined or described products act apparently directly upon the thick net work of autonomic and sympathetic nerve fibers in the nasal and bronchial tissues. Similar observations are made but it seems entirely reasonable to maintain a position which is positive in relation to the actual existence of an allergic state which is due at least to a large extent to the demonstrable sensitization to bacteria.

The concept which I hold and which at present seems logical is briefly and simply as follows:

The individual at one time or another has an upper respiratory infection after which time he has very frequent colds or sinus disease and becomes sensitive to the bacterial protein. At this time the presence of an allergy probably could be demonstrated by the study of the nasal smear as described by Hansel. Later after his "flu" or bronchopneumonia or sinusitis which is the trumpet blast which razes the last wall of allergic resistance he appears with his characteristic allergic story. The nasal symptoms follow in an unmistakable form in its wake. This in our experience has occurred in individuals with other allergic states. Without wishing to appear too bold it has definitely occurred to me that the opponents of the concept of bacterial allergy have denied on the basis of questionable premises. That a sensitization can be established at a very definite time has been observed. It is why this state is established at this given time that is as important as that it is established.

I have briefly intimated a defense of the concept of bacterial sensitization and have to this point approached it as a well defined entity. This may be in some instances. It has, in our experience, been noticed in conjunction with the other sensitizations. In only one instance have I been able to find no other source of trouble suggested in a history or in subsequent skin tests. It has been quite interesting to note the frequency of the associated sensitization to fungi and bacteria.

We have considered each case which presented particularly any upper respiratory manifestation as a possible bacterial sensitization. With pronounced frequency they have been skin positive. It might be said that we do see negative reactions to bacterial antigens.

It is rather difficult to present this subject in a

sound and unchallengeable way for it must be admitted that all factors are taken into consideration in the therapy.

I shall now briefly present a few cases which to me seem to be highly suggestive of bacterial allergies. Most of these are associated with other types of allergic manifestations which does not weaken the case.

#### CASE I

Mrs. E. who is forty has complained over a period of three to four years of nasal blocking. This has been perennial and unassociated with any environment except that drafts make her worse. There are no other allergic manifestations. She had been subject to severe colds for the two years previous to present difficulty. She was found skin sensitive to pork, rice, turnip, radish, cabbage, cauliflower, apple, chocolate, potatoes, egg plant and lettuce. She showed sharp positive intracutaneous reactions to bacterial allergens as well as trichophyton and alternaria. She has been comfortable on combined treatment and is now on a treatment-free period. She has reported that she has had a slight cold but the constant long period of discomfort characterized by nasal blocking and sneezing long after the "cold" has been absent.

#### CASE II

Mrs. B. referred by Dr. H. W. Powers was seen. All skin tests were negative except scratch tests to colon typhoid group, streptococcus and pneumococcus group. Intracutaneous tests to fungi were negative but very dilute mixed bacterial antigen showed a sharply positive delayed reaction. She was returned for further nasal or sinus treatment. This patient was particularly interesting in that she at least appeared to be sensitive solely to bacteria and will probably clear nicely after surgical intervention.

#### CASE III

L. L. age eleven seen February 20, 1937. She was in a combination of disagreeable states. She had a definite asthma which was relieved by adrenalin. After relief postural drainage was productive of large amount of white clear drainage. Her mother gave the history of asthma after every bout of upper respiratory infection. She thought cats made her worse. No foods were blamed. She was found skin positive to a number of foods and three plus to cat hair and one plus to dog hair. She reacted sharply to intracutaneous bacterial antigen and on one occasion had a systemic reaction before leaving the office.

She was treated with this material and diet. She improved and since treatment had some mild colds



or suggestions but no subsequent asthma has occurred.

During recuperation she was given some codliver oil and had considerable respiratory difficulty, she was then given halibut liver oil which resulted in a similar upset. She had been mildly sensitive to extracts of cod and halibut.

The fact that asthma does not occur as frequently after upper respiratory infections as it did before hyposensitization to bacteria is quite interesting.

I believe that this is the result of desensitization to bacterial protein and the increase of bacterial population is better handled by the individual which comes with an acute infection. With this hyposensitization her immunity has been increased with its naturally following assistance.

#### CASE IV

J. P. age six, referred by Dr. M. G. Sloo and seen October 1938. Began to have trouble at the age of one year which was characterized by frequent colds. These would last about two weeks and then would be followed by severe asthmatic attacks. During winter when she gets warm then cools would have asthmatic attack. Thinks eggs and pineapple cause trouble.

During infancy had some eczema and last year had pneumonia.

General physical examination negative except for very noisy chest.

She was found to be mildly skin sensitive to wheat, rice, rye, barley, corn, cauliflower, apple, peas, navy beans, celery, parsnip, potatoes, and egg plant. She was sharply sensitive to bacteria in very weak dilution also to alternaria and slightly less to trichophyton.

She was taken off of all suspected foods. Because of her history it was thought that there was considerable inability to adjust herself to thermal change, so thermal treatment was given. She has also been given vaccine and fungus extracts. Her trouble has quite definitely improved and a few days ago her mother reported that a severe upper respiratory infection had occurred which was not followed by asthma as was invariably the case previous to the present regimen.

Therapy as applied to these individuals is on the basis of our findings. Certainly the foods, inhalants and contactants are dealt with as they arise. Adequate treatment of all diseases of the nose and para nasal sinuses should be carried out so far as possible. Vaccines are used as an ordinary antigen should be used. We have reason to believe that the regimen as would apply to the pollen treatment of hayfever is definitely indicated. Frank seasonal hayfever which shows a sensitization to bacteria as indicated by skin tests is given bacterial antigens as are the fungus, food

or heat sensitive cases. It is difficult here to refrain from discussing this last condition but suffice it to say that we have considered it for some years as an important factor in bacterial allergies.

#### SUMMARY

- (1) A review of some of the ideas held concerning bacteria allergy has been presented.
- (2) Personal concept briefly stated.
- (3) Cases presented which seem pertinent.
- (4) Therapy has been briefly discussed.

#### CONCLUSIONS

That bacterial allergy can be considered as an important factor in allergic manifestations of the respiratory tract.

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High Concentrations of Sulfanilamide Most Effective—High concentrations of sulfanilamide will inhibit the growth and multiplication of bacteria, Perrin H. Long, M.D., Eleanor A. Bliss, Sc.D., and W. Harry Feinstone, B.S., Baltimore, state in their article, "Mode of Action, Clinical Use and Toxic Manifestations of Sulfanilamide," in *The Journal of the American Medical Association* for Jan. 14.

With severe infections, capable of being cured by sulfanilamide, it is important to attain an effective concentration of sulfanilamide in the blood as soon as possible. The authors advise that a large initial dose of sulfanilamide be given in order to bring about the desired level of ten milligrams per every 3.3 ounces (100 cc.) of blood as quickly as possible and that this level be maintained by doses of the drug given at intervals of four hours both day and night.

In severe infections the administration of sulfanilamide should be discontinued only if severe complications occur.

In the case of milder infections, levels of sulfanilamide in the blood of from 5 to 10 milligrams are generally adequate to bring the infection under control. Here again it is also important to maintain an even concentration of the drug and giving it at intervals of four hours is best.

If the patient cannot swallow tablets, if vomiting is present or if the sulfanilamide is not readily absorbed from the gastrointestinal tract, the drug can be injected.

The amount of sulfanilamide per pound of body weight required to establish adequate levels of the drug in the blood is considerably greater for children than for adults. This is due to the fact that children take more fluid per pound of body weight than do adults, and when fever is present this difference is even more marked.

Sulfanilamide has produced many toxic complications. Among the most common ones observed in human beings are loss of appetite, nausea, vomiting, dizziness and headache. Alcohol is contraindicated during sulfanilamide therapy, as it tends to accentuate cerebral disorders. Patients who are receiving sulfanilamide should be warned against driving automobiles, because the dizziness and decreased mental acuity sometimes seen may render them dangerous on the road.

Because of the toxic complications the patient should be carefully supervised, hospitalized whenever possible, while sulfanilamide is being given. The patient who is receiving sulfanilamide needs the intelligent and careful supervision of a physician.

## PRESIDENT'S PAGE

To the Members of The Kansas Medical Society:

I have on my desk The Kansas City Medical Journal announcing the program of the Annual Spring Medico-Military Symposium which was held March 13 and 14 in Kansas City, Missouri. Also The Wichita Medical Bulletin announcing their Spring Clinical Assembly, held March 21 and 22. Apparently these programs were excellent and I trust as many as possible attended these meetings.

We also have a Bulletin from Shawnee County Medical Society showing their efforts as host for our Kansas Medical Society Annual Meeting, to be held in Topeka, May 1, 2, 3, 4.

However, at this time, I am wondering if the membership will go to Topeka with a spirit of gladness of work well done, or with a feeling of remorse. It is up to you!

Never before has there been a greater opportunity or a greater need for each and every member to do his full share, in order to maintain the prestige of medicine in Kansas.

I have always contended and always shall, that the success of any undertaking of The Kansas Medical Society is wholly dependent on the local societies and its individual members.

We still have a big job ahead. May I urge that every member extend himself to the utmost to the task assigned right now! In two more weeks or sooner we will have the answer.

N. E. Melencamp, M.D., President.



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## EDITORIAL

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### ACTIVITIES IN MEDICAL HISTORY

The January issue of the "Bulletin of the History of Medicine" announces an important expansion of its function in becoming the official organ of the American Association of the History of Medicine.

Beginning in 1933 as a small supplement to the Johns Hopkins Hospital Bulletin, two years later it became a separate publication under the editorship of Dr. Henry E. Sigerist. The magazine has steadily grown in importance in the field of medical history and has reflected the scholarship of its editor and the excellent work being done in the Institute of the History of Medicine at Johns Hopkins University.

At the annual meeting of the American Association of the History of Medicine, an official publication was authorized by the new constitution. At the October meeting of the council of the association it was decided to make The Bulletin of the History of Medicine the organ of the association. The magazine will remain the property of the Institute. The editor, Dr. Sigerist, is also an officer in the association, and will, it is announced, work in close co-operation with the council of the association. There will be monthly issues for ten months of the year. An important section will be devoted to medico-historical news and activities.

For those whose interest in medicine leads into the field of medical history the Bulletin will be found of value because of the excellence of the material being chosen for publication and for news of activities being carried on in this field of research.—  
R. B. S.

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### THE TRAINING OF INTERNISTS

Since the establishment of the various specialty boards there has been an increase of interest in the training of young medical graduates. In a recent address before the Congress on Medical Education and Licensure, Dr. J. H. Musser, Professor of Medicine at Tulane, pointed out the need for properly trained internists, listed the five different methods

by which this training may be attained and suggested the development of additional facilities. He states that while there are many institutions specializing in one certain field of medicine which offer ample training in the clinical aspect of the specialties there are few devoted exclusively to internal medicine and the number of residencies available are exceedingly limited. The point is made that there should be more internists trained than those for the other specialties, because more people go to the internist than to other specialists.

The possibilities for instruction, according to Dr. Musser, include: 1. University fellowships. 2. Clinical fellowships. 3. Hospital residencies. 4. Preceptorships. 5. Formal graduate training.

The most satisfactory method of training Dr. Musser considers to be a fellowship in a medical school. Here the fellow may qualify and ultimately obtain a degree of Master of Science, or even a Doctor of Philosophy. From two to five years may be spent in such a fellowship. Here graduate students receive a salary sufficient for self-support.

Clinical fellowships are obtainable in a few excellent clinics throughout the country. They are usually for three years.

Hospital residencies are open only to a limited number. These appointments are, in most hospitals, not of sufficient duration to allow for the amount of training required by the American Board of Internal Medicine. However, there are University hospitals where residents may move up in rank each year until a full residency has been attained in one or another department. The criticism is made that too often in hospital residencies there is insufficient supervision.

Dr. Musser makes the suggestion that hospital residencies may be developed into places of superior training. He believes that a very much larger number of hospitals can be made available. There are now only 212 such residencies offered in internal medicine.

Dr. Musser advocates the revival of the preceptorship method and shows the advantages to both the teacher and student.

In graduate training in a school of graduate medicine, Dr. Musser raises the objection that there is

too much formal teaching. The graduate student, he believes, should be put more on his own initiative and be permitted to develop himself under proper tutelage.

Young graduates whose interests lie in internal medicine should be given every encouragement to continue their study in view of qualifying for the American Board of Internal Medicine. Men of such training must take the place of the general practitioner in the near future.

The development of graduate training in the voluntary hospitals as Dr. Musser suggests, should be encouraged. Here the young physician may be trained in a way that the university or charity hospital cannot do. Here he will come into contact with patients who demand his respect and cultivate his tact. His work will be under the direct observation of staff members who will exercise wholesome supervision over his progress. There should be greater opportunities offered for study and a minimum of routine required.

The preceptor method might well be combined with graduate training in a voluntary hospital. Here the preceptor, a qualified internist, may teach his student by precept and example the ways to approach the analysis of clinical cases and the methods of managing them. He can direct his student in the pursuit of knowledge and teach him the ethics and courtesies that should characterize a doctor of medicine.

Many hospitals not associated with medical schools carry on valuable educational work. All such hospitals should respond with enthusiasm to a program of advanced clinical teaching. The value of the hospital to the community should be increased and the effect upon the medical profession in the locality should be elevating.

Special emphasis should be given to the fact pointed out by Dr. Musser, that money and an aristocratic background is not at all important to a young doctor who wishes to qualify himself for a speciality in medicine. He may be without money, but if he is willing to undergo some sacrifice for a few years, he can live in comfort while taking advantage of the advanced educational facilities open to him for graduate study.—R. B. S.

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## CANCER CONTROL

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### RECENT ADVANCES IN X-RAY THERAPY\*

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Kansas City, Kansas

The recent advances in roentgen irradiation consist primarily of improvement in the detail of the application of the x-ray therapeutically rather than basic alteration of methods previously employed. Expressed in a sentence, radiation therapists are now convinced more than ever before that their chief problem consists of the delivery of the proper quantity of radiation at a quality that will be absorbed by the tissue to be treated.

Our conception of radiosensitivity and radioresistance has undergone modification. The simple axiom of Bergonie and Tribondeau, as stated in 1906, that embryonal tissue is most radiosensitive and therefore tumors so characterized should assure hopeful results has not always been borne out. The evaluation of the patient and his disease now seems of first importance; cell type forms the basis but its location in relation to its blood supply, tumor bed, and accessibility to radiation together with the age of the patient and other clinical features are modifying factors of ultimate prognosis. The modern radiation therapist must correlate the histologic and clinical findings to properly plan treatment. Regaud, Lacassagne, Stewart, Borak, Coutard, Desjardins and others have shown how essential this correlation must be to insure success in any radiation effort.

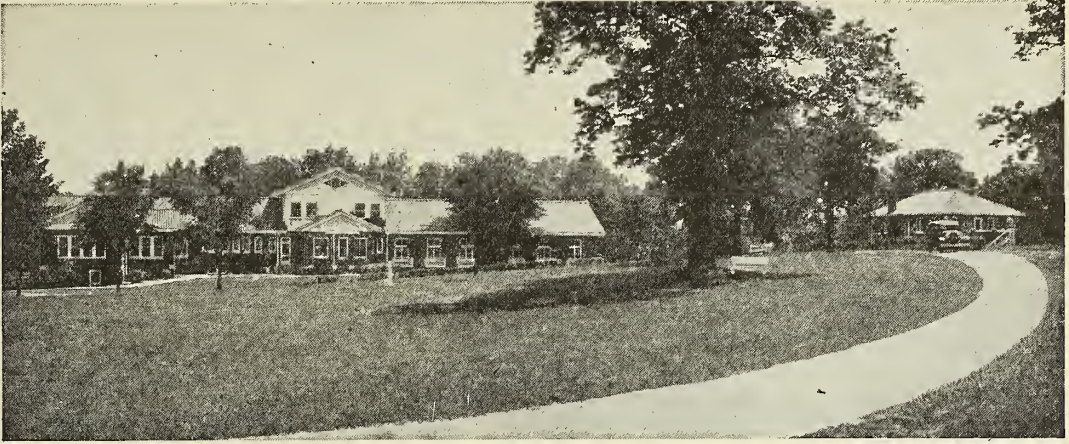
The matter of dosage is still undecided in detail and standardization seems distant. The fixing of the international unit has contributed to a standard conception but it is unlikely that a thumb-nail rule will ever be realized in radiation therapy any more than in any other branch of clinical medicine.

The matter of supervoltage has stimulated the interest of all, and the imagination of perhaps too many. "Reports emanating currently from clinics where this form of therapy is employed leave its value still within the realm of conjecture." Radiologists of experience in both report that there are few advantages possessed by radiation by supervoltage that cannot be approached, if not duplicated, by the present universal type of high voltage apparatus of 200 K. V.

Critical comparisons of clinical results employing the large radium cannon as an evidence in favor

\*Presented before the Spring Medico-Military Symposium, Kansas City, Missouri, March 29, 1938.





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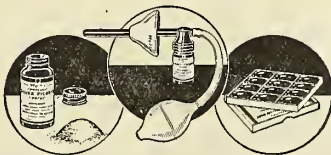
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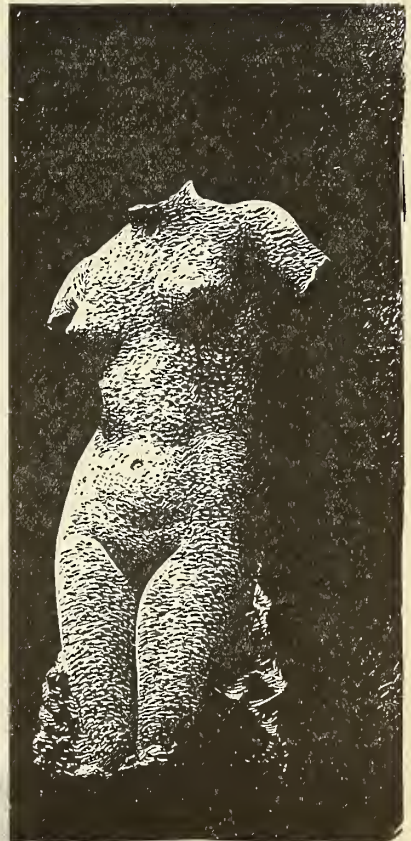
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of supervoltage have, on the whole, been disappointing.

Freedman's comparison of the large and small radium bomb or cannon showed no advantage of the larger over the smaller and no improvement in clinical results over 200 K. V. x-rays in the treatment of laryngeal cancer.

It has been clearly shown, therefore, that x-rays generated at super-voltages have no selective action on cancer cells. Only the advantage of economy of time in administering an equal depth dose favors the higher voltage. Apparatus operating at or near 400 kilovolts is now being offered by manufacturers at less exorbitant cost and it is reasonable to believe that such apparatus may increase the range of usefulness of radiation therapy by complement rather than substitution.

One of the advances in the study of quality has been the demonstration of the difference in the appearance time of the epithelite and the epidermite by changing the wave-length. The body repairs an erythema from the softer radiation at a greater rate than it does from a more penetrating type. As an example, a full erythema dose given at 200 K. V. filtered through 0.5 millimeter copper will reach its peak on the sixteenth to eighteenth day, while if the filtration is two millimeters of copper, the erythema will reach its peak on the twentieth to the twenty-second day. This fact is of importance in planning operations following preoperative irradiation as well as showing tissue reaction to the quality of radiation.

Coutard has shown that in addition to the regularity in appearance time of the reaction, there is also a periodic sensitivity of laryngeal cancer and suggests the same property in all malignancies. He observed that the cycle of epithelial reaction to radiation corresponds with the cycle of greater activity of cancer cell life in those cases in which results were most favorable. He plans, therefore, because of this periodic sensitivity to administer rather intensive doses of irradiation in short, recurring series, or daily administration of subintensive doses protracted over thirty, forty or even more days. Such a plan will avoid the administration of a large amount of the treatment during the period of repair when, theoretically at least, the treatment would be less effective.

Warren has recently shown concrete results of increased responsiveness of heated neoplastic tissue following irradiation by x-ray. His experimental data demonstrates that combined fever and x-ray therapy prove of real value in animal cancer but the effect on human beings has not yet been proven.

Crabtree found that the destruction of glycolysis by irradiation is different in tumors than in normal tissue and that the end result of radiation was due to a series of physical and chemical metabolic changes. An exact knowledge of these fundamental

cell changes may lead to a more effective system of radiation therapy.

One of the most pleasant features of our developing knowledge of the value of the therapeutic use of x-ray has been its success in the treatment of benign conditions. Long erroneously accused as a contraindication, selected inflammatory pelvic diseases may now be successfully handled by radiation therapy. Encouraging reports are found in the literature of its value in peritonitis. Functional amenorrhea, dysmenorrhea and menorrhagia when intelligently selected, are ideally handled by roentgen radiation. Its value in the treatment of fibromyomata has convinced most of its critics. Its dominant position in dermatology opened the greater field of infection where it has been popularized by Desjardins. The recent report of Powell and others of its use in the treatment of lobar pneumonia stimulates more than passing interest. The great value of its use in the treatment of gas bacillus infections should be emphasized. Kelly's recent report commands its employment in all gas-infected cases without exception. His enthusiastic accusation that the omission of its employment in cases ending fatally constitutes malpractice, does not appear so radical to some who have witnessed its obvious great value.

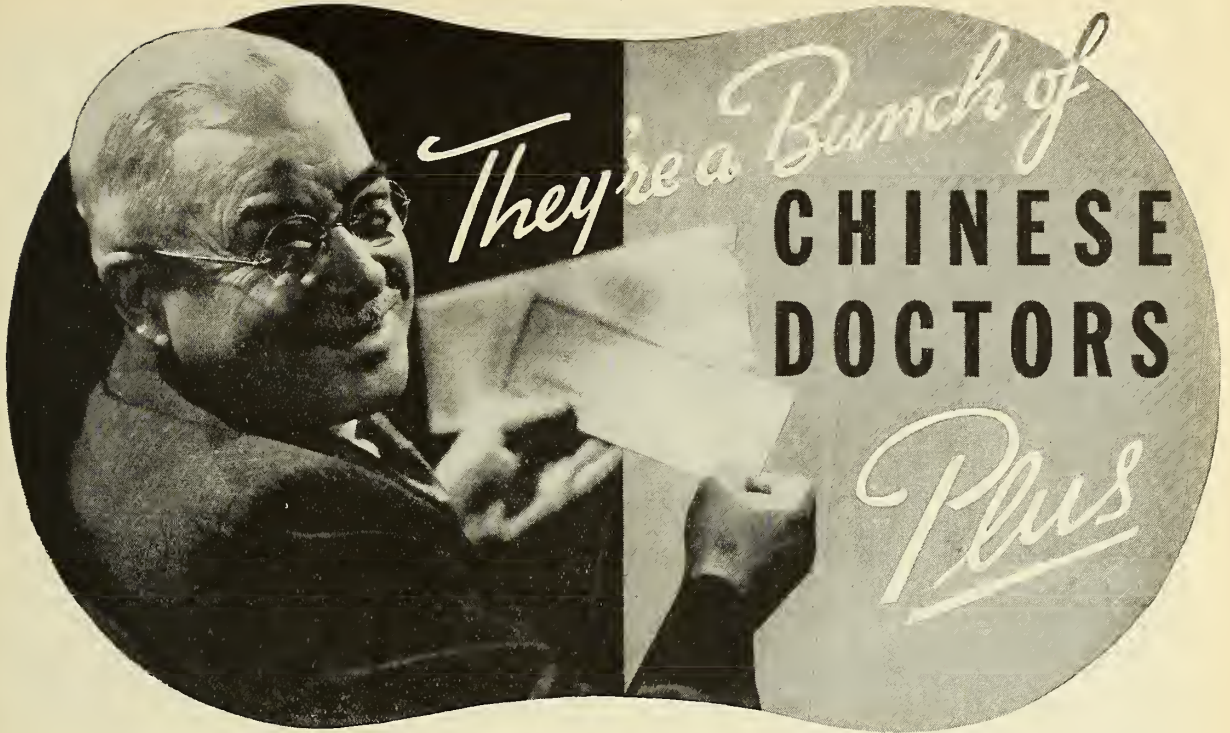
There can be no question that x-ray therapy is becoming more and more a procedure of choice in the treatment of thyrotoxic conditions. It controls the disease as well as surgery but without surgery's associated mortality and morbidity. Harris and Rose correctly rate irradiation as the safest and most effective method for treating certain types of hyperthyroidism.

The value of roentgen radiation as a palliative agent in many painful conditions is finding supporters in increasing numbers. Perhaps heralded too loudly in the treatment of arthritis, it has proven of palliative value in selected cases. Many of the neuritides, both inflammatory and malignant, are entirely relieved by comparatively small doses of x-ray. Its effect in herpes zoster, tic douloureux and trifacial neuralgia is at times immediate.

If treatment is instituted early in surgical mumps, progress of the infection may be prevented or the complication aborted entirely. Roentgen treatment of erysipelas reduces the duration of the febrile stage by more than one-half. The pain of furuncles is reduced and suppuration is hastened when treated late and occasionally aborted when treated early. Those clinicians interested in diabetes are the greatest supporters of roentgen radiation of this complication and physicians themselves diabetics, are truly missionaries.

Margraf recently reported the effect of roentgen treatment of puerperal mastitis in 118 cases as compared to a parallel series of 127 cases treated conser-





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vatively, spontaneous healing occurred in ninety-two per cent of the roentgen-treated cases when treatment was begun within the first twenty-four hours; and in eighty-one per cent when treated within forty-eight hours (but before abscess formation), both figures to be compared with seventy-one per cent spontaneous healing when treated by the usual conservative measures.

The treatment of patients presenting clinically negative chronic cough as reported in a series of 700 cases by Liebman in which eighty per cent relief was obtained, is worthy of mention.

Recent advances have further proven the conception of the advantage of the combined treatment of carcinoma of the cervix. The recent report of the British Cancer Commission emphasizes this statement. The tendency is away from the interstitial use of radium, with greater emphasis on less trauma of topical and intracanalicular application supplemented by roentgen radiation. We have now reached the place in the treatment of this disease when we can agree with Pearson's recent analysis that the cause of death in carcinoma of the cervix is due to its associated complications.

Much has been written recently on the advantage of a more comprehensive classification of breast cancer, particularly for the benefit of case analysis and recovery percentages. The plan of treatment of breast cancer approaches standardization. In a recent compilation from the literature, we found that statistics covering many thousand cases warrant this statement. Breast cancer patients, when untreated, live an average of thirty-four months and twelve per cent live five years; of the group accepted, operated upon and given x-ray treatment postoperatively, 47.7 per cent live five years; of all the third group, most of which were relatively advanced when first seen and who were treated preoperatively and postoperatively, 51.3 per cent live five years. Furthermore, recent statistical studies qualify the opinion that cancer of the breast occurring in women of forty years of age or older whose tumor is slowly growing in the breast, unattached to the skin or chest wall, without palpable nodes or evidence of distant metastases, is a primary surgical problem to be treated by postoperative x-ray if pathological findings warrant the conclusion that the disease is more extensive than clinically believed. All other cases are primary roentgen radiation problems. The younger woman whose tumor is localized in the breast should be operated upon after preoperative radiation and cases whose disease was more advanced when first seen should be operated upon when, as the result of roentgen radiation, the disease has been reduced to an operative stage and then followed by postoperative radiation. It is the present

conception that the palliative operation is unjustified.

The work of Herrell, Smith and others bear out the current belief that ovarian function is an important factor in carcinogenesis of cancer of the breast, that pregnancy and no doubt menstruation, increases the stimulus to breast carcinoma growth. Therefore, suppression of menstruation by roentgen sterilization seems not only justified but definitely indicated. Isolated instances of distant metastatic lesion disappearance following surgical removal of the ovaries or roentgen sterilization have served to emphasize the indication of the procedure.

Teleroentgen therapy, meaning the exposure of the entire body at relatively long distances as applied to cases of Hodgkin's disease, leukemia, polycythemia vera, etc., is being tried with some, but relatively unimpressive success.

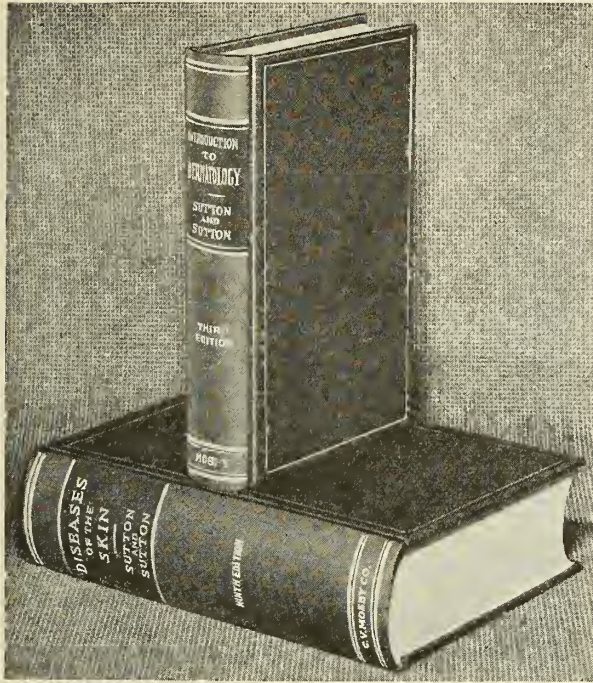
Cancer occurring in the mouth and tongue is showing improved curability statistics since the advent of radium-mold applicators and combined x-ray irradiation and now appears to enjoy greater promise from the application of Pfahler's and Coutard's plan of protracted roentgen radiation to both the primary lesion and regional node extension.

Likewise primary cancer of the lung is being treated by protraction on the theory of periodic sensitivity and longer maintained saturation with improved curability statistics.

Increasingly numerous reports are being made of cases of cancer of the esophagus which have been healed by irradiation. So far, only cases of involvement of the upper two-thirds have been successfully handled but no case has ever been successfully treated by any other method.

Experience in radiation of bone tumors qualifies rather definite conclusions; osteochondromas show no response; giant-cell tumors are relatively sensitive but not equally so because of so many variants. Bone cysts show little or no response. Chondrosarcomas are slow growing tumors and tend to remain localized; they are only moderately sensitive in any case and are best treated by a combination of surgery and x-ray therapy. Endothelial myeloma of Ewing is the most radiosensitive of all bone tumors; they may disappear entirely but frequently recur as distant metastases. Multiple myeloma is sensitive but a disease so widespread that it can be controlled only for a limited period. Osteogenic sarcoma are, as a class, extremely resistant; periosteal fibrosarcoma seems to respond better. In the Registry of Bone Sarcoma, 80 patients are found who have passed the five-year period. Of these, 42 were cured by surgery, 35 by surgery and irradiation and three by irradiation alone. Primary malignant bone tumors are obviously a combination surgical





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and radiation problem. Metastatic bone tumors may, and frequently do, show complete regression and recalcification and it appears that the effort should be made more frequently.

The scope of this discussion must of necessity be limited to those more common or illustrative pathologies. Never in the history of the specialty of radiation therapy has case study been more carefully recorded and reported. Three comprehensive treatises by Americans on clinical radiation therapy have been published in the last year. The recent First International Congress of Radiology, held in Chicago, wherein each paper delivered on five consecutive days was translated and shown concurrently in three languages illustrates the worldwide intense interest and study the specialty is receiving.

Proof of the value of any procedure of treatment of cancer will come slowly. Time is the essential in evaluating any plan or method. Roentgen irradiation is contributing importantly and judging from the past, much more is to be expected.

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## EYE, EAR, NOSE & THROAT

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### BRAIN ABSCESES\*

Ernest E. Tippin, M.D.

Wichita, Kansas

A. P. a white male age sixteen, took sick August 9, 1937 with a slight cold and a pain in his forehead. The next day there appeared a swelling in the center of his forehead which was very tender to touch and about the same time his left ankle began to pain him.

He dragged around a week, gradually feeling worse.

On August 19 the physician in charge called me in as he thought a frontal sinus infection had produced an osteomyelitis of the frontal bone.

The boy appeared toxic and was very irritable, which his mother stated was contrary to his usual disposition, even when ill. He had a temperature of 103 degrees F. There was a fluctuating swelling above his glabella about two inches in diameter. His left ankle was swollen and tender but no fluctuation. I could find no gross pathology in his nose. The only thing in his history that I could elicit of special interest was the fact that he had bumped his head on the bottom of the pool while diving, about ten days before the onset of his symptoms.

He was sent immediately to the hospital and an x-ray of his head was made and a spinal puncture done. Both were normal.

The abscess on the forehead was then opened. The culture from this was reported as staphylococcus aureus.

Complete physical and neurological check up revealed no further pathology.

He ran a typically septic temperature for eight days and then continued normal. At no time did the pulse rate drop below normal. Repeated blood counts averaged 13,000 W.B.C. with seventy per cent polys.

On September 19 the abscess on the forehead suddenly reformed after being apparently healed for several days. X-ray was again negative. The question of osteomyelitis of the frontal bone was considered and on opening the abscess widely, the condition of the bone did not seem to justify a resection. The abscess healed quickly and he was discharged on September 27 apparently well, except for some soreness in his ankle on walking.

On October 6, he awakened his mother about 3:20 a.m. in a convulsion which she described as a violent jerking of all the muscles on the left side of his body but when seen about 6:00 a.m. the only objective neurological symptom present was a slight weakness of the muscles of the left arm. Reflexes normal. The eye grounds were normal. Subjectively he complained of a very severe headache and the skin of the forehead was tender and slightly edematous over an area about two inches in diameter. This area was opened and a small portion of the bone beneath was resected, but since the dura beneath it appeared normal there seemed to be no justification for a search for a possible brain abscess.

For four days he seemed to be improving then suddenly he developed all the classical symptoms of violent intracranial involvement and died October 12.

Autopsy revealed frontal sinuses normal as well as normal dura over frontal lobes. There was a well encapsulated abscess in the right frontal lobe completely surrounded by apparently normal brain tissue and a second abscess about twice as large as the first in the right temporal lobe, which was not so well encapsulated.

Cultures from both abscesses revealed staphylococcus aureus.

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For the fifth consecutive year, the psychiatric staff of the Menninger Clinic, Topeka, Kansas, will offer a week's postgraduate course in Neuropsychiatry in General Practice, April 17-22. This practical presentation of psychiatry through lectures and case presentations has been attended by physicians from nineteen states in the past four years. Enrollment is limited to thirty. Address inquiries to Dr. Robert P. Knight, Menninger Clinic, Topeka, Kansas.

\*Read before the Kansas City Society of Ophthalmology and Otolaryngology December 15, 1938.



# RECENT ADVANCES IN THE SCIENCE OF NUTRITION

## VII. The Unknown Vitamins

● The past twenty years of biochemical research have steadily brought additions to the list of vitamin factors known to be indispensable in proper human nutrition. Today, only vitamins A, B<sub>1</sub>, C and D, riboflavin and the P-P factor are universally considered as essential to man. In general, the requirement for these factors is greater in certain phases of the human life cycle than in others.

This list of essential factors is probably incomplete. It has been aptly stated (1) that our species has evolved in the direction of lengthening rather than shortening the list of known dietary essentials. However, it is reasonable to believe that the above list, although incomplete, probably does include all factors whose absence from the ration may cause the most severe types of human dietary deficiency disease.

Investigations on the nutritive requirements and the biochemistry of the lower forms of animal and plant life constitute the frontiers of modern vitamin research. From studies such as these may come the first clues as to new vitamins which may ultimately be proven essential in human nutrition. For example, it was upon research of this type that the dietary requirement of the rat for riboflavin was established and

the importance of riboflavin (1) in human nutrition postulated.

During recent years, a large number of factors essential to animals other than man has been enunciated (2). As examples might be mentioned the factor in plant juices required by herbivora (3); the factor in fresh meat essential to trout (4); and vitamin K, needed for normal blood coagulation in fowls (5). Whether these or others of the factors essential to lower forms of life will also prove indispensable to man, the future must decide.

The knowledge that our present list of essential vitamins may be incomplete, need not be alarming. However, such knowledge should serve to emphasize the desirability of a diet formulated according to the best present concepts of the science of nutrition. Nature intends that man should receive all dietary essentials, known or unknown, through food and it will be through the medium of a judiciously chosen, varied diet that these essentials can best be obtained. Needless to state, the several hundred varieties of wholesome, nutritious, commercially canned foods lend themselves admirably to formulation of such varied, protective diets.

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(1) 1938. J. Amer. Med. Assn. 110, 1278.

(2) 1938. Ibid. 110, 1441.

(3) 1936. Proc. Soc. Exper. Biol. Med. 35, 217.

(4) 1928. Science. 67, 249.

(5)a. 1935. Nature. 135, 652.

b. 1935. Biochem. J. 29, 1273.

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## NEWS NOTES

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### LEGISLATION

The following is a report of several legislative matters of interest to the medical profession.

HB 147, the osteopathic bill introduced in the House permitting the practice of medicine and surgery by osteopaths, was brought out of the House Committee on Hygiene and Public Health without recommendation on March 8. The vote thereon was five to four. This action terminated eight weeks of study and consideration by that committee which included several hearings and an inspection trip to the osteopathic school at Kirksville, Missouri, and the University of Kansas School of Medicine at Rosedale. The committee made no amendments to the bill. It did, however, include two amendments requested by the osteopaths themselves. One of these amendments pertains to the right of osteopaths from foreign countries to obtain reciprocity. The other amendment, which is entirely inadequate for the purposes claimed, was contemplated to have the effect of restricting osteopathic privileges. Neither amendment in any way affected the complete practice of drug therapy by osteopaths. The measure at the time this article was written, was pending on the House Calendar with approximately one hundred prior bills awaiting action.

SB 171, the osteopathic proposal in the Senate, was killed by the Senate Committee on Temperance and Public Health on March 10. The vote thereon was three to nothing with the fourth member not voting (the Chairman not being permitted to vote except in case of a tie). The Chairman of the committee, Senator C. A. Richards of Nemaha County, who is one of the sponsors of the measure, has served notice that he will attempt to have the action of the committee overridden by the Senate. This action requires a two thirds majority of that body.

HB 44, a proposal relating to the establishment of a Board of Naturopathic Examiners and containing many far reaching provisions in the field of medicine and surgery, was killed by the House Committee on Hygiene and Public Health on March 8.

HB 222, which includes certain increased standards and regulations for the practice of optometry and the fitting of eye glasses by doctors of medicine and which was approved by the Society has passed the House and is now pending in the Senate.

HB 404 which provides that chiropractors shall attend at least two days of postgraduate instruction each year has passed the House and is now awaiting action in the Senate.

Several other measures of interest to the medical profession and now pending are a proposal requiring compulsory vaccination as a precedent to school entrance; a measure transferring all official state board funds to the state general fund (would include the Board of Medical Registration and Examination); a bill which would give the Board of Regulations the effect of law over certain regulations (would also affect the Board of Medical Registration and Examination); a proposal permitting hospitals to maintain liens in connection with judgments which include compensation for hospital services; a bill pertaining to the licensing of psychological consultants; a section in the Probate Code which improves the status of medical claims against insolvent estates; a section in the Corporation Code which continues the present prohibition against corporations practicing medicine and surgery; a bill prohibit-

ing the sale of barbituric acid preparations without a physicians prescription; a bill controlling the sale of narcotic drugs.

Two other measures of unusual interest were prepared but not introduced. One of these permitted non-profit corporations to engage in the provision of group hospitalization services. The other enabled certain corporations to participate in pre-payment medical and hospital service.

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### 80th ANNUAL SESSION

Plans for the 80th Annual Session to be held in Topeka in May are almost complete. The committees are hard at work to make this one of the most entertaining and instructive sessions in the eighty year history of the Annual Meetings of the Society.

The program is excellent. This committee has secured nationally known enthusiastic teachers for every hour of lectures during the four day meeting. The following are the names of the speakers who have consented to date, to attend the meeting: Dr. Claude D. Head, Jr., Washington, D. C.; Dr. Will S. Horn, Fort Worth, Texas; Dr. J. M. Martin, Dallas, Texas; Dr. Waltman Walters, Rochester, Minnesota; Dr. Arnold S. Jackson, Madison, Wisconsin; Dr. Julius Jensen, St. Louis, Missouri; Dr. Roy R. Grinker, Chicago, Illinois; Dr. Jay Arthur Myers, Minneapolis, Minnesota; Dr. A. D. Prangen, Rochester, Minnesota; Dr. L. J. Birsner, St. Louis, Missouri; and Dr. Joseph L. Baer, Chicago, Illinois. The committee is giving special attention to the schedule of talks so that every physician who attends will have the opportunity to hear the guest speaker he desires.

The popular noon round-table luncheons and the alumni banquets will be repeated. The following schools have made arrangements to hold alumni banquets: University of Kansas School of Medicine; Kansas City College of Medicine and Surgery; Kansas Medical College; Rush Medical College; Northwestern University Medical School; Washington University School of Medicine; St. Louis University School of Medicine; Creighton University School of Medicine; University of Nebraska College of Medicine; University of Louisville School of Medicine; and State University College of Medicine. These banquets will be held on Tuesday, May 2. Announcements of additional school banquets will be made in the April issue of The Journal.

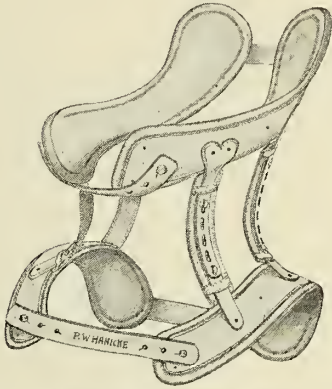
Entertainment has not been neglected. The trap and skeet tournament and the golf tournament will be held at the Topeka Country Club on Monday, May 1, and the stag banquet following the tournaments will climax the day of sport activities. The annual banquet on May 3, will be held at the Topeka High School followed by a dance on the roof garden of one of the Topeka hotels.

The scientific exhibits, commercial exhibits and all lectures will be held in the Masonic Temple where there is adequate space to accommodate the entire session. The following commercial exhibitors have accepted booth space to date: H. J. Heinz Company; Petrolagar Laboratories, Inc.; Mead Johnson & Company; Medical Protective Company; General Electric X-Ray Corporation; Philip Morris & Company; Midwest Surgical Supply Company; Gerber Products Company; Parke, Davis & Company; A. S. Aloe Company; J. B. Lippincott Company; Jones Metabolism Equipment Company; Eli Lilly & Company; H. G. Fischer & Company; Quinton-Duffens Optical Company; The W. E. Isle Company; Lederle Laboratories; C. B. Fleet Company; A. J. Griner Company; Burroughs Wellcome & Company, Inc.; Coca-Cola Company; Holland-Rantos Company, Inc.; M. & R. Dietetic Laboratories, Inc.; The Zemmer Company; Riggs Optical Company; Denver Chemical Mfg. Company;



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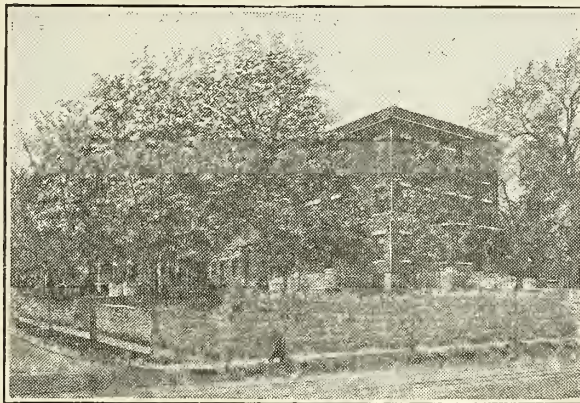
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Hotel reservations should be made at an early date and the following hotels will be happy to serve every member of the Society: Hotel Jayhawk, Hotel Kansan, Capitol Hotel, Commerce Hotel, Throop Hotel, Fifth Avenue Hotel, and the Reid Hotel. In the event members have difficulties in locating hotel reservations, Dr. Harry J. Davis, Mills Building, Topeka, who is chairman of this committee, will be glad to make arrangements in this matter.

Entertainment for the physician's wives will include a summer fashion show presented through the Crosby Brothers store of Topeka; a tea for the visiting women; and a day at the Woman's club for those who wish to attend, as guests of the Auxiliary.

Committees of the Shawnee County Medical Society for the 1939 State Meeting are as follows: J. L. Lattimore, M.D., General Chairman; M. B. Miller, M.D., General Treasurer.

Program—L. R. Pyle, M.D., Chairman; L. E. Eckles, M.D.; J. G. Stewart, M.D.; O. R. Clark, M.D.; W. W. Reed, M.D.; H. W. Powers, M.D.

Scientific Exhibits—F. C. Taggart, M.D., Chairman; A. J. Brier, M.D.; Leo Smith, M.D.; S. H. Boyd, M.D.

Commercial Exhibits—J. T. Hunter, M.D., Chairman; O. M. Raines, M.D.; C. E. Joss, M.D.; B. J. Ashley, M.D.

Golf and Trap Shoot—E. H. Decker, M.D., Chairman; H. T. Morris, M.D.; B. I. Krehbiel, M.D.; F. L. Loveland, M.D.; F. C. Boggs, M.D.; R. J. Miller, M.D.

Banquet-Entertainment—H. L. Kirkpatrick, M.D., Chairman; G. L. Kerley, M.D.; L. L. Saylor, M.D.; H. H. Woods, M.D.

Accommodations—H. J. Davis, M.D., Chairman; G. F. Helwig, M.D.; C. K. Schaffer, M.D.

Arrangements—Guy Finney, M.D., Chairman; J. D. Bowen, M.D.; D. C. Wakeman, M.D.; L. A. Curry, M.D.

Publicity—H. L. Clark, M.D., Chairman; P. M. Powell, M.D.; H. B. Talbot, M.D.

## DEATH NOTICES

Dr. Francis Garner Emerson, 78 years of age, died at his home in Wellington on February 12. He was born in Afton, Iowa, and attended the grade and high schools there. He attended the Iowa State University and received his medical degree in 1885. He began the practice of medicine in Wellington and remained there until the time of his death. He was an honorary member of the Sumner County Medical Society.

Dr. Hubert C. Hannah, 64 years of age, died at his home in Junction City on February 14. Dr. Hannah was born in Kirksville, Missouri in 1875 and received his medical education at the Washington University Medical School in St. Louis, Missouri. He was graduated in 1897. He was a member of the Golden Belt Medical Society and the Geary County Medical Society.

Dr. George Knowlton Janes, 78 years of age, died at his home in Williamsburg on February 17. Dr. Janes was born in 1860 in Palmyra, Missouri, and received his grade school education in Honeywell, Missouri. He attended Missouri Medical College, St. Louis, and was graduated in 1884. The same year, he located in Williamsburg and continued his practice of medicine until the time of his death. He had practiced in Williamsburg for more than 55 years. He was an honorary member of the Franklin County Medical Society.

Dr. Joseph H. McGauhey, 78 years of age, died in a St. Joseph hospital on February 8. He was a resident of White Cloud. Dr. McGauhey was born in 1861 and attended the Missouri Medical College, St. Louis, Missouri, receiving his medical degree in 1888. He had practiced in White Cloud for over fifty years and was an honorary member of the Doniphan County Medical Society.

## POSTGRADUATE COURSES

The following postgraduate courses will be held on the dates and places described below:

The seventh and eighth course on obstetrics and pediatrics opened for four weeks beginning March 20. The Kansas State Board of Health through funds furnished by the Social Security Act has worked in cooperation with the Society to make these courses possible. The guest speakers for the seventh course are Dr. William F. Mengert, State University of Iowa and Dr. John H. Randall, State University of Iowa on obstetrics; and Dr. Jean V. Cooke, Washington University, and Dr. J. D. Boyd, University of Iowa, on pediatrics. The seventh course will be held in Beloit, Smith Center, Hays, Ellsworth and Abilene.

The eighth postgraduate course will have as guest speakers, Dr. William J. Dieckmann, and Dr. M. Edward Davis, Chicago Lying-in Hospital, in obstetrics; and Dr. Mandel L. Spivek, Children's Memorial Hospital, Chicago, in pediatrics. The towns which will present the course are Leavenworth, Sabetha, Clay Center, Wamego, and Lawrence. The county medical societies will act as hosts for the meetings held in their towns.

The postgraduate program on venereal disease, also sponsored by the Kansas State Board of Health in cooperation with the Society started on March 9 and will continue through April 21. Dr. J. V. Van Cleve, Wichita, is the speaker for this course and the following towns have been selected as hosts for the course: Holton, Ottawa, Chanute, Great Bend, Marion, Winfield, Eureka, Clay Center, Colby, Hays, Pratt, and Dodge City. The local county medical society will also act as hosts for these meetings.

A postgraduate program on cancer control began on March 20 sponsored by the Kansas State Board of Health. The speaker for the course is Dr. Nathan A. Womack, St. Louis, Missouri. The places selected for the course meetings are Emporia, Wichita, Great Bend, Hays, Manhattan, and Lawrence.

There will be afternoon and evening sessions for all courses. All the courses are open without charge to all licensed doctors of medicine.

## A. M. A. MEETING

The 1939 meeting of the American Medical Association will be held in St. Louis, Missouri, May 15-19. All members of the Association are invited to attend and hear the lectures of nationally prominent physicians from all over the country.

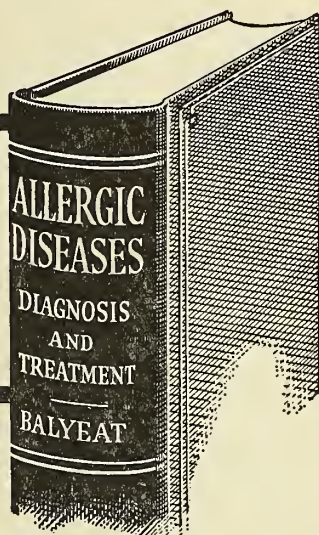
This meeting is of great importance to every member of the A. M. A. and any physician in Kansas who is able to attend will find many advantages in the trip.

Hotel reservations should be made within the near future, inasmuch as the prominence of this meeting will bring physicians from all parts of the United States to attend.

All Kansas doctors are urged to make a reservation to attend the meeting in St. Louis.



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## COUNCIL MEETING

A joint meeting of the Council and the Board of Medical Registration and Examination, was held in Topeka on March 5.

Legislative matters were discussed. All members of the Council and the Board were present.

## BLIND PROGRAM

Dr. C. J. Mullen, State Ophthalmologist, Kansas City, Kansas issued the following report for February 1939 pertaining to the Kansas State Board of Social Welfare restoration of sight program:

No. of eye examination reports .....	1696
No. of applicants approved eligible for Aid to the Blind .....	1364
No. of applicants not eligible for Aid to the Blind ....	332
Restoration of Sight Program	
No. of cases eligible for treatment .....	475
No. of cases under treatment .....	95
83 cases are new	
12 cases have completed one authorized treatment	
No. of cases authorized treatment has been cancelled....	8
Total cost of 22 authorized treatments completed during February 1939	
Complete cost .....	\$1,640.76
Doctor's fees .....	60.42%
Hospital fees .....	33.26%
Optical fees .....	5.39%
Drug fees .....	.91%
Total cost of authorized treatment completed to date .....	\$10,797.32
No. of cases completed .....	136
No. of cases still eligible for Aid to the Blind .....	44
(12 of these cases have been reauthorized)	
No. of cases not eligible for Aid to the Blind after treatment .....	92

## K. C. SOUTHWEST CLINICAL SOCIETY

The Kansas City Southwest Clinical Society sponsored its annual Spring Meeting on March 13 and 14 in Kansas City, Missouri.

Guest speakers for this meeting included Dr. Cyrus C. Sturgis, professor of internal medicine University of Michigan Medical School; Dr. Sumner Koch, associate professor of surgery Northwestern University Medical School, and Major General C. R. Reynolds, Surgeon General of the United States Army, Washington, D. C.

The Kansas City Academy of Medicine held their monthly dinner on Tuesday evening, March 14, and had as their guest, Dr. Harry Pratt Smith, professor of pathology State University of Iowa College of Medicine. Dr. Smith's talk was on "Recent Progress in the Study of Hemorrhage".

## COUNTY SOCIETIES

The regular meeting of the Clay County Medical Society was held in Clay Center on February 22. Dr. E. S. Wegner, Lincoln, Nebraska, who was the guest speaker on the program, talked on "Pediatric Problems."

The Cloud County Medical Society held a meeting in Concordia on February 22. Election of officers for 1939

was held and the following will serve: Dr. E. R. Gelvin, Concordia, president; Dr. A. M. Townsden, Jamestown, vice president; Dr. J. M. Porter, Concordia, secretary; and Dr. E. N. Robertson, Jr., Concordia, treasurer.

Dr. R. C. Harner, Howard, was elected president of the Elk County Medical Society at a meeting held in Howard on February 8. Others elected to serve are as follows: Dr. F. K. Day, Longton, vice-president; Dr. F. L. Depew, Howard, secretary-treasurer, and State Meeting Delegate.

Dr. L. C. Joslin, Harper, and Dr. P. G. Miller, Anthony were elected to serve as president and secretary-treasurer respectively of the Harper County Medical Society at a meeting of that society on February 7.

The Kiowa County Medical Society held election of officers for 1939 at their February meeting in Haviland. Those elected are as follows: Dr. James A. McLaughlin, Greensburg, president; Dr. C. D. Updegraff, Greensburg, vice president; Dr. George E. Scheer, Haviland, secretary-treasurer.

Members of the Lyon County Medical Society met in Emporia on February 7. Dr. W. B. Granger, Emporia, presented a paper on "Sinus Trouble, With Discussion of Non-Operative Treatment", and Dr. D. P. Trimble, Emporia, spoke on "Complications and Surgical Treatment of Sinus Disease".

Dr. W. W. Miller, Osborn, was elected president of the Osborne County Medical Society at a recent meeting of that society in Osborn. Dr. J. D. Johnson, Alton, will serve as vice president; and Dr. Andrew P. Brown, Osborn, secretary-treasurer.

The Wyandotte County Medical Society held a meeting on March 7 in Kansas City with the following speakers and their titles respectively: Dr. George A. Walker, Kansas City, presented a Pathological Conference on syphilis; Dr. W. F. Lunsford, Kansas City, presented a motion picture film on syphilis. On March 21 a dinner will be held with Dr. Charles McMartin, Omaha, Nebraska, as the guest speaker. His subject will be "Kidney Tumors."

## AUXILIARY

## PRESIDENT'S MESSAGE

Dear Auxiliary Members:

As we enter the second half of this Auxiliary year, I want you all to think back and just remember what we have accomplished.

So far this year I am happy to write you that I think you all are making our Kansas Auxiliary very outstanding in the parts you have in all clubs and organizations, and also you are helping maintain the morale of your doctor. How he needs you.

Now, to look forward, plans have been started for our convention in Topeka. We are happy to announce that we think you are all going to enjoy the program, speaker, and the entertainment that is being planned for you, so look forward to the Topeka meeting in May.

I accompanied my husband in January to his convention held in Memphis, Tennessee. How we enjoyed the southern hospitality. I had the pleasure of attending the Memphis



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SOLOMON, P.; MITCHELL, R. S. AND PRINZMETAL, M.: The Use of Benzedrine Sulfate in Postencephalitic Parkinson's Disease—*J. A. M. A.*, 108:1765, May 22, 1937.

FINKELMAN, I. AND SHAPIRO, L. B.: Benzedrine Sulfate and Atropine in Treatment of Chronic Encephalitis—*J. A. M. A.*, 109:344, July 31, 1937.

DAVIS, P. L. AND STEWART, W. B.: The Use of Benzedrine Sulfate in Postencephalitic Parkinsonism, *J. A. M. A.*, 110:1890, June 4, 1938.

MATTHEWS, ROBERT A.: Symptomatic Treatment of Chronic Encephalitis with Benzedrine Sulphate—*Am. J. Med. Sci.*, 195:448, April, 1938.

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Medical Auxiliary meeting and heard their state president, Mrs. H. E. Christenberry, speak to the Auxiliary. A local doctor spoke to them on State Medicine. They had an attendance of one-hundred. Their meetings are held in the mornings and they stay for lunch, a different committee being appointed at each meeting to serve the lunch.

As plans are now I will visit Shawnee, Cloud, Labette, Wilson, Sedgwick, and Ford counties in March.

Mrs. Simonds, Chairman of National Press and Publicity, has written for a news letter from Kansas for the next National News Letter.

Mrs. Frank E. Coffey.

The Sedgwick County Auxiliary Board met at luncheon with Mrs. E. J. Nodurft, February 6. Assisting hostesses were mesdames E. E. Tippin, A. L. Ashmore, and N. C. Nash.

The Sedgwick County Auxiliary met at luncheon at the Robinson Intermediate School, February 13. Dr. Martin Palmer, guest speaker, gave an address on "Child Speech Defects." The program also included flute selections by Miss Dorothy Goddard: "Minuet" by Mozart and "Wind Among the Trees" by Briccaldi. Miss Ella Rose Wright was accompanist.

The Cloud County Auxiliary held their first meeting of the year, February 8. The chief business of the meeting was the planning for the special program of the Women's Field Army for Cancer Control to be held in Concordia, March 16. Mrs. C. D. Kosar, Cloud County press-publicity chairman of the Auxiliary, is county chairman of the cancer control group. In a sparkling letter Mrs. Kosar announces that the auxiliary appointed two committees, one to care for out of town guests and the other to handle the auxiliary meeting that evening.

The Cloud County Auxiliary played a large part in organizing the St. Joseph's Hospital Auxiliary last autumn. Mrs. Kosar is vice president of the hospital auxiliary. Mrs. Ross Weaver, of the Cloud County Auxiliary, wrote its constitution.

The Labette County Auxiliary met at the home of Mrs. T. D. Blasdel for their January meeting. Mrs. A. C. Baird presented a paper on "Diabetes." Mrs. C. S. McGinnis, chairman Hygeia Committee gave an outstanding report on the years work in that department.

The Labette County Auxiliary calls attention of readers of the Parsons Sun to the radio programs sponsored by the A. M. A. by regularly printed notices in that newspaper, giving the nearest broadcasting station and time of broadcast.

Our National President graciously acknowledges her meeting with the Kansas Board at Hays as follows:  
My Dear Mrs. Coffey:

I want you and the other members of Kansas Auxiliary to know how very much I appreciate the many courtesies extended me while attending a meeting of your executive board in Hays.

Believing as I do in the power for good vested in the Auxiliary, it was indeed a pleasure to personally observe the splendid work of you and your co-workers in Kansas.

Thanking you for your kind expressions of good wishes and co-operation, I remain,

Sincerely yours,  
Mrs. Charles C. Tomlinson.

This month's report from Sedgwick County again shows the activity of Sedgwick Auxiliary members in lay organi-

zations of Wichita. Many names of members are given as prominently participating in A. A. U. groups, Optimist Club, D. A. R., Twentieth Century Club, library committee of Wesley Hospital, Wichita Child Guidance Centre, Lioness Club, Girl Scouts, Kappa Kappa Gamma, Creighton University Alumni Club, National Guard Dinner, P. T. A.

The Wyandotte County Auxiliary has elected the following officers: Mrs. E. R. Mills, president; Mrs. Lewis G. Allen, vice-president; Mrs. Eugene Reeves, secretary; Mrs. John A. Billingsley, treasurer.

The February meeting of the Wyandotte County Auxiliary was held at the home of Mrs. J. A. Billingsley. After a delightful luncheon the company was entertained by songs by Mrs. E. R. Mills, accompanied by Mrs. L. B. Gloyne, and by an address by Mr. Chester Staton on "Kansas Arts and Artists."

Ford County Medical Auxiliary has placed Hygeia in fifteen grade schools in their district this year and have voted to place the magazine in the rural schools for six months period, beginning, September, 1939.

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2. Q. What are the *Karo* equivalents?

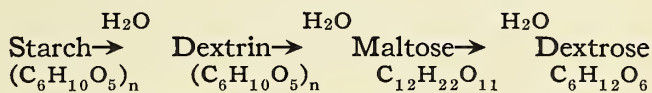
A. 1 oz. vol. . . . .	40 grams
	120 cal.
1 oz. wt. . . . .	28 grams
	90 cal.
1 teaspoon . . . . .	15 cal.
1 tablespoon . . . . .	60 cal.

3. Q. What is the difference in caloric value between *Karo* and dry maltose-dextrins products?

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**OBSTETRICS**—Two Weeks Intensive Course October 23rd. Informal Course starting every week.

**FRACTURES & TRAUMATIC SURGERY**—Ten Day Formal Course April 10th, June 19th, and September 25th. Informal Course every week.

**OTOLARYNGOLOGY**—Two Weeks Intensive Course starting April 10th. Informal Course every week.

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Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245 ☐  
Laryngoscope, 1935, XLV, 149-154 ☐

N. Y. State Jour. Med. 1935, 35-No. 11,590 ☐  
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**The Journal Of  
THE KANSAS MEDICAL SOCIETY**

*Owned and Published by The Kansas Medical Society*

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Volume XL

APRIL, 1939

Number 4

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*Greetings*

The Shawnee County Medical Society is happy to serve as host to The Kansas Medical Society at its 80th Annual Session. We cordially and enthusiastically welcome you to Topeka to what we hope will be the largest and most satisfying meeting the Society has ever had.

We hope you will take time to carefully look over the program that is given in the following pages. We are proud to present to you a list of distinguished speakers, some from out of the state and some from the members of the Kansas Society. We have tried to provide a wide variety of interests and an unusual opportunity for instruction in both general and specialized fields.

The members of The Kansas Medical Society owe it to themselves and to the organization to come to this meeting. It is an opportunity for further education. We hope, too, that it may provide relaxation and social contacts, a chance to make new friendships and renew old ones.

It is the sincere wish of the Shawnee County Society to make this, the 80th Annual Meeting, the most successful in the history of The Kansas Medical Society, and with everyone's help this is assured.

WILLIAM C. MENNINGER, M.D.

President, Shawnee County Medical Society.

*Schedule of Events***80TH ANNUAL SESSION  
THE KANSAS MEDICAL SOCIETY***Topeka—May 1, 2, 3, 4, 1939***MONDAY MAY 1**

- 8:30 A. M. TOURNAMENT KANSAS MEDICAL SKEET AND TRAPSHOOTING ASSOCIATION  
*Izaak Walton League*  
(Located approximately 3 miles East of Topeka. Follow U. S. Highway 40 East to sign pointing South to club.)
- 8:30 A. M. TOURNAMENT KANSAS MEDICAL GOLFING ASSOCIATION  
*Topeka Country Club*  
(Follow Topeka Boulevard or U. S. Highway 75 South to 27th Street.)
- 6:30 P. M. ANNUAL STAG BANQUET  
*Topeka Country Club*

**TUESDAY MORNING MAY 2****REGISTRATION—Entrance Lobby Masonic Temple**

Open from 8:00 a. m. to 6:00 p. m.

- 8:00 A. M. OPENING OF SCIENTIFIC AND TECHNICAL EXHIBITS  
Grand Lobby Masonic Temple

**SECTION ON MEDICINE—Main Auditorium**

Presiding: B. H. Mayer, M.D., Ellsworth

- 8:30 A. M. THE MODERN CONCEPT OF DIABETES  
*A. J. Revell, M.D., Pittsburg*  
The association of dysfunction of the other endocrine glands. Consideration of the diagnosis, showing the importance of history, physical examination, and laboratory studies. A discussion of the treatment, with emphasis on the education of the patient, the importance of the recognition of other involved endocrine glands, diet, exercise, the use of insulin and vitamins, and the treatment of complications.  
Discussion: Maurice Snyder, M.D., Salina
- 9:10 A. M. SUPPORTIVE MEASURES IN THE TREATMENT OF PNEUMONIA  
*Claude D. Head Jr., M.D., Washington, D. C.*  
The value of nursing care, the management of complications, the use of oxygen and drugs, diet, fluids, salt, etc., in the management of the pneumonia patient.  
Discussion: Henry N. Tihen, M.D., Wichita
- 10:00 A. M. INTERMISSION
- 10:15 A. M. ECZEMA IN CHILDREN  
*Allen Olson, M.D., Wichita*  
Discussion: J. V. Van Cleve, M.D., Wichita



## 10:55 A. M. CONTACT DERMATOSES

*John A. Borghoff, M.D., Omaha, Nebraska*

This group has assumed a new interest because of the elimination by study, of these eruptions from the broad classification of eczema. The diagnostic features, means of determining causative factors and treatment will be discussed. Colored slides.

Discussion: E. H. Decker, M.D., Topeka

## SECTION ON SURGERY—Lodge Room A

Presiding: C. S. Campbell, M.D., Coffeyville

## 8:30 A. M. FRACTURES OF THE PHALANGES AND METACARPAL BONES

*L. S. Nelson, M.D., Salina*

A brief review of the anatomical structures of the phalanges and metacarpals with relationship to fractures. A demonstration of the use of plaster casts and banjo splints, and a new type of cast made of craft paper.

Discussion: Maurice A. Walker, M.D., Kansas City

## 9:10 A. M. FRACTURES AND DISLOCATIONS OF THE CERVICAL SPINE

*James B. Weaver, M.D., Kansas City*

A statistical study of forty-six cases of fractures and dislocations of the cervical spine which have been treated in the University of Kansas Hospitals in the last fourteen years. Both emergency treatment and after care will be stressed.

Discussion: R. J. Dittrich, M.D., Fort Scott

## 10:00 A. M. INTERMISSION

## 10:15 A. M. THE ELECTROCARDIOGRAPH AS AN AID TO THE SURGEON

*Ivan R. Burket, M.D., Asbland*

The information which can be obtained from an electrocardiogram that would help determine the fitness of a patient for surgery, and following this, a presentation of three brief case histories illustrating these main points.

Discussion: R. B. Stewart, M.D., Topeka

## 10:55 A. M. CONSERVATIVE SURGERY OF THE KIDNEY

*Waltman Walters, M.D., Rochester, Minnesota*

The indications for conservative operations on the kidney for hydronephrosis and multiple renal calculi, both unilateral and bilateral. Reference will also be made to other conservative surgical procedures such as heminephrectomy and resection of the kidney.

Discussion: V. E. Chesky, M.D., Halstead

## ROUND TABLE LUNCHEONS—12:15 P.M.

## SECTION ON MEDICINE

*Hotel Kansan Roof Garden*

Subject: Pneumonia

Guest: Claude D. Head, Jr., M.D., Washington, D. C.

Presiding: Harry Lutz, M.D., Augusta

## SECTION ON SURGERY

*Hotel Jayhawk, Convention Hall*

Subject: Chemotherapy in Surgery

Guest: Waltman Walters, M.D., Rochester, Minnesota

Presiding: W. F. Bernstorff, M.D., Winfield

## SECTION ON OPHTHALMOLOGY

*Hotel Jayhawk, Green Room*

Subject: Ophthalmology—Questions

Guest: Avery D. Prangen, M.D., Rochester, Minnesota

Presiding: W. G. Gillett, M.D., Wichita

## SECTION ON DERMATOLOGY

*Hotel Kansan, Assembly Room*

Subject: Dermatology—Questions

Guest: John A. Borghoff, M.D., Omaha, Nebraska

Presiding: H. W. Manning, M.D., Emporia

## *Schedule of Events*

### GENERAL SESSION—Main Auditorium

Presiding: N. E. Melencamp, M.D., Dodge City

1:45 P. M. ADDRESS OF WELCOME

*W. C. Menninger, M.D., Topeka*

President, Shawnee County Medical Society

1:50 P. M. PRESIDENT'S ADDRESS

*N. E. Melencamp, M.D., Dodge City*

President, The Kansas Medical Society

2:10 P. M. THE TREATMENT OF GASTRIC AND DUODENAL ULCERS

*Waltman Walters, M.D., Rochester, Minnesota*

The difference between gastric and duodenal ulcers, indications and contra-indications for medical treatment, and types of surgical procedures and their results. Incidence and treatment of recurring ulceration will also be discussed.

2:55 P. M. SERUM TREATMENT OF PNEUMONIA

*Claude D. Head Jr., M.D., Washington, D. C.*

A consideration of the bacteriology of the disease, the technic of sensitivity tests, the dosage of serum, complications calling for increased dosage, serum reactions, the control of these reactions, and the reduction in mortality which may be expected from the proper use of serum.

3:40 P. M. INTERMISSION

3:55 P. M. RADIATION THERAPY IN MALIGNANT DISEASES

*James M. Martin, M.D., Dallas, Texas*

A review of the Cancer Problem of today with a nontechnical discussion of malignancies as they are met with by the physician in his every day work. The annual death rate from cancer in this country is now something more than 150,000. This terrible destruction of life is entirely too high. What must be done? We will talk about it at this meeting.

4:40 P. M. OBSERVATIONS ON THE COMMON DERMATOSES

*John A. Borghoff, M.D., Omaha, Nebraska*

This will cover a colored slide demonstration, a discussion of diagnostic features and measures used in treatment.

6:30 P. M. ALUMNI BANQUETS

*(See page 151 for listing)*

8:30 P. M. HOUSE OF DELEGATES

*Jayhawk Hotel*



## WEDNESDAY MORNING MAY 3

### SECTION ON MEDICINE—Main Auditorium

Presiding: Lyle F. Schmaus, M.D., Iola

#### 8:30 A. M.—THE PROGNOSIS AND TREATMENT OF STREPTOCOCCUS MENINGITIS

*Frank L. Menehan, M.D., Wichita*

Before the introduction of sulfanilamide, meningitis due to the beta hemolytic streptococcus was a highly fatal disease, the mortality being about 97%. The methods of treatment which were formerly in use are briefly considered. The recent experience of representative clinics with sulfanilamide is described and four additional recoveries are reported. The present concepts of rational treatment are discussed.

Discussion: G. M. Edmonds, M.D., Horton

#### 9:10 A. M. THE DIAGNOSIS OF DISEASE WITHOUT INSTRUMENTS OF PRECISION

*Ralph H. Major, M.D., Kansas City*

Discussion: M. G. Sloo, M.D., Topeka

#### 10:00 A. M. INTERMISSION

#### 10:15 A. M. SUBJECTIVE CARDIAC SYMPTOMS AND THEIR INTERPRETATION

*John M. Porter, M.D., Concordia*

The statistical importance of heart disease as the cause of death and disability. The diagnosis of heart disease made by subjective symptoms and the objective findings. The importance of the subjective symptoms is emphasized by the growing importance of coronary disease. A consideration of pain, dyspnea, orthopnea, cough, sputum, pulmonary edema, ascites, and palpitation.

Discussion: Philip W. Morgan, M.D., Emporia

#### 10:55 A. M. TREATMENT OF CONGESTIVE HEART FAILURE

*Julius Jensen, M.D., St. Louis, Missouri*

This paper is a review of the various means of treatment of congestive failure—the proper use of rest, opiates and other sedatives.

Special emphasis is placed upon the recent advances in digitalis therapy, the indications for the use of digitalis, the choice of preparations, the choice of dosage and early signs of over-digitalization. The choice and use of diuretics and their correlation with digitalis is discussed as well as the use of oxygen, glucose and venesection and the means of measured response to treatment.

Discussion: Fred J. McEwen, M.D., Wichita

### SECTION ON SURGERY—Lodge Room A

Presiding: G. E. Kassebaum, M.D., ElDorado.

#### 8:30 A. M. THE AMBULATORY TREATMENT OF FRACTURES OF THE LOWER EXTREMITY

*Howard E. Snyder, M.D., Winfield*

The paper will be presented almost in its entirety through the medium of motion pictures. The ambulatory management of fractures of the lower extremities with the use of a new type walking iron will be demonstrated.

Discussion: Frank E. Coffey, M.D., Hays

#### 9:10 A. M. MALIGNANT TUMORS OF THE THROAT

*James M. Martin, M.D., Dallas, Texas*

A plain practical discussion of the subject with few technicalities. Evidence will be presented to show that irradiation therapy is the method of choice in all malignant tumors of the pharynx and larynx. Certainly it should replace surgery in all border-line and inoperable cases.

Discussion: Earl C. Padgett, M.D., Kansas City, Missouri

## *Schedule of Events*

10:00 A. M. INTERMISSION

10:15 A. M. SUPERFICIAL CANCER

*M. Trueheart, M.D., Sterling*

A discussion of cancer of the lip and skin. Methods of treatment by radium and x-ray. Presentation of lantern slides of cases before and after treatment.  
A statistical study of the end results of cancer of the lip.

Discussion: L. D. Johnson, M.D., Chanute

10:55 A. M. THE INJECTION TREATMENT OF HERNIA

*Arnold S. Jackson, M.D., Madison, Wisconsin*

Discussion: John L. Grove, M.D., Newton

### ROUND TABLE LUNCHEONS—12:15 P.M.

#### SECRETARIES LUNCHEON

*Kansan Hotel, Colonial Room*

#### SECTION ON MEDICINE

*Hotel Kansan, Roof Garden*

Subject: Rheumatic Heart Disease

Guest: Julius Jensen, M.D., St. Louis, Missouri

Presiding: R. R. Melton, M.D., Marion

#### SECTION ON SURGERY

*Hotel Jayhawk, Convention Hall*

Subject: Common Duct Obstruction

Guest: Arnold S. Jackson, M.D., Madison, Wisconsin

Presiding: Frank Foncannon, M. D., Emporia

#### SECTION ON RADIOLOGY

*Hotel Kansan, Assembly Room*

Subject: Radiology

Guest: James M. Martin, M.D., Dallas, Texas

Presiding: L. G. Allen, M.D., Kansas City

#### SECTION ON OTOLARYNGOLOGY

*Hotel Jayhawk, Green Room*

Subject: Otolaryngology—Questions

Guest: Louis J. Birsner, M.D., St. Louis, Missouri

Presiding: L. B. Spake, M.D., Kansas City

### GENERAL SESSION—Main Auditorium

1:45 P. M. THE EARLY DIAGNOSIS AND MANAGEMENT OF THE CROSS-EYED CHILD

*Avery D. Prangen, M.D., Rochester, Minnesota*

2:15 P. M. WHAT THE GENERAL PRACTITIONER SHOULD KNOW ABOUT EAR, NOSE AND THROAT DISEASES

*Louis J. Birsner, M.D., St. Louis, Missouri*

A discussion of the border-line cases that are of interest to the general practitioner and those that are of interest to the specialist.

2:45 P. M. THE APPROACH YEARS

*Will S. Horn, M.D., Fort Worth, Texas*

A consideration of our approach to senility. The fifth and sixth decades of life particularly will be discussed from the standpoint of how we may increase our longevity and postpone incapacity from disease, particularly the degenerative processes.



3:30 P. M. INTERMISSION

3:45 P. M. PREOPERATIVE AND POSTOPERATIVE TREATMENT OF  
TOXIC GOITER CASES

*Arnold S. Jackson, M.D., Madison, Wisconsin*

4:30 P. M. PROGNOSIS IN HEART DISEASE

*Julius Jensen, M.D., St. Louis, Missouri*

This paper is an attempt to apply the newer concepts of heart disease to the prognosis of the various forms of heart disease.

The effect of different factors which influence it, such as: Cardiac enlargement; first onset of congestive failure; auricular fibrillation; electrocardiographic changes; and response to treatment are surveyed.

The discussion is limited to hypertensive or degenerative heart disease including angina pectoris or coronary occlusion and rheumatic heart disease.

Finally, brief attention is given to the effect of heart disease on the surgical and obstetrical prognosis.

6:30 P. M. ANNUAL BANQUET

*Topeka High School Cafeteria*

9:00 P. M. DANCE

*Jayhawk Hotel*

## THURSDAY MORNING MAY 4

### SECTION ON MEDICINE—Main Auditorium

Presiding: R. H. Moore, M.D., Lansing

8:30 A. M. UNUSUAL LEUCOCYTE REACTIONS

*C. G. Leitch, M.D., Kansas City*

This paper includes a brief review of the function of the blood forming organs, and especially a consideration of unusual leucocyte responses. In particular aleukemic leukemia and the agranulocytoses will be considered.

Discussion: J. L. Lattimore, M.D., Topeka

9:10 A. M. CHRONIC UNDULANT FEVER AS A CAUSE OF NEURASTHENIA

*Will S. Horn, M.D., Fort Worth, Texas*

Discussion: Fred E. Angle, M.D., Kansas City

10:00 A. M. INTERMISSION

10:15 A. M. POLYCYTHEMIA VERA

*Ralph G. Ball, M.D., Manhattan*

The differential diagnosis and a discussion of the clinical syndrome with the cardinal points in diagnosis and laboratory findings. Presentation of a case now under treatment.

Discussion: Noble P. Sherwood, M.D., Lawrence

10:55 A. M. EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS

*J. A. Myers, M.D., Minneapolis, Minnesota*

We have reached the time when pulmonary tuberculosis can be diagnosed in the pre-clinical stage; that is, long before symptoms and abnormal physical signs are present and tubercle bacilli are to be found in the sputum. The pre-clinical stage offers the greatest opportunity for successful treatment of pulmonary tuberculosis. In this stage if adequate treatment is administered, fully 90 per cent of the patients make a good recovery, whereas, if the disease is advanced when treatment is begun, approximately 60 per cent die even though they are admitted to the sanatorium.

Discussion: C. F. Taylor, M.D., Norton

## *Schedule of Events*

### SECTION ON OBSTETRICS AND GYNECOLOGY—Lodge Room A

Presiding: Clay Coburn, M.D., Kansas City

#### 8:30 A. M. THE MANAGEMENT OF PELVIC INFLAMMATORY DISEASE

*Ray A West, M.D., Wichita*

An analysis of 169 cases of pelvic inflammatory disease from the clinical aspect; with special emphasis on the conservative management, operative indications and technic.

Discussion: G. C. Bates, M.D., Independence

#### 9:10 A. M. THE MANAGEMENT OF OCCIPUT POSTERIOR

*L. A. Calkins, M.D., Kansas City*

Through more accurate diagnoses of 2500 serial cases it has been learned that Occiput Posterior occurs with about equal frequency with Occiput Anterior. Through careful analysis of the results obtained in these cases it has been further shown that Occiput Posterior differs from Occiput Anterior only in that the labor is about one hour longer and that, therefore, no difference in management is required.

Discussion: James A. Simpson, M.D., Salina

#### 10:00 A. M. INTERMISSION

#### 10:15 A. M. CARCINOMA OF THE FUNDUS UTERI AND ADNEXAE

*Harold V. Holter, M.D., Kansas City*

Dealing with the diagnosis, symptoms and treatment of cancer of the body of the uterus, chorioepithelioma, malignancy of the tubes and the diagnosis and treatment of the various ovarian cysts.

Discussion: W. M. Mills, M.D., Topeka

#### 10:55 A. M. OBSTETRICAL HEMORRHAGES

*Joseph L. Baer, M.D., Chicago, Illinois*

The four common causes of obstetric hemorrhage in the order of their frequency are abortion, postpartum hemorrhage, placenta praevia, and ablatio placentae. Each condition is discussed and various types of treatments compared.

Discussion: A. S. Anderson, M.D., Lawrence

### SECTION ON PEDIATRICS AND NEUROLOGY—Lodge Room B

Presiding: G. E. Paine, M.D., Hutchinson

#### 8:30 A. M. LEAD ENCEPHALOPATHY

*Donald N. Medearis, M.D., Kansas City*

In children, the more severe intoxications with lead are characterized by an encephalopathy which often may cause death or permanent cerebral injury. Lead may enter the body either by ingestion or inhalation. The common symptoms and characteristic pathology are discussed. The diagnosis of lead poisoning in infants rests upon definite positive findings characteristic of the disease rather than the exclusion of all similar pathologic states. Treatment is unsatisfactory, but a knowledge of calcium metabolism and the physical chemistry of lead phosphates offers the best approach to the problem. A fatal case is reported with slides illustrating certain interesting pathological findings.

Discussion: Douglass Orr, M.D., Topeka

#### 9:10 A. M. WHY PEOPLE GO TO CULTISTS

*Robert P. Knight, M.D., Topeka*

This paper is an attempt to evaluate a few of the reasons why some patients prefer treatment by cultists to treatment by physicians, and to indicate some of the possible reasons why physicians may drive patients to cultists through failure to understand certain psychological factors involved in every illness.

Discussion: Ralph M. Fellows, M.D., Osawatomie

#### 9:50 A. M. INTERMISSION



## 10:05 A. M. EPILEPSY IN CHILDHOOD

*M. G. Peterman, M.D., Milwaukee, Wisconsin*

Idiopathic epilepsy is a clinical entity separate and distinct from other diseases in which convulsions may occur. The diagnosis of epilepsy cannot be made until all possible organic causes of the convulsions have been excluded. Greater refinements in diagnosis and more careful study is gradually reducing the percentage of cases which may be considered idiopathic epilepsy. The treatment is discussed, and the hereditary characteristic of the disease is presented.

Discussion: E. G. Padfield, M.D., Salina

## 10:55 A. M. NEWER KNOWLEDGE OF THE CENTRAL VEGETATIVE NERVOUS SYSTEM

*Roy R. Grinker, M.D., Chicago, Illinois*

The last five years have added a wealth of knowledge concerning centers in the hypothalamus and in the cortex which function as centers for the vegetative nervous system. Many of the syndromes which result from damage to these structures imitate diseases of the internal organs. This problem of differential diagnosis will be discussed along with the newer knowledge of the physiology.

Discussion: Norman Reider, M.D., Topeka

## ROUND TABLE LUNCHEONS—12:15 P.M.

## SECTION ON MEDICINE

*Hotel Jayhawk, Florentine Room*

Subject: Undulant Fever

Guest: Will S. Horn, M.D., Dallas, Texas

Presiding: W. E. Janes, M.D., Eureka

## SECTION ON TUBERCULOSIS

*Hotel Jayhawk, Roof Garden*

Subject: Tuberculosis

Guest: J. A. Myers, M.D., Minneapolis, Minnesota

Presiding: F. L. Loveland, M.D., Topeka

## SECTION ON PEDIATRICS

*Hotel Jayhawk, Convention Hall*

Subject: Immunization Procedures

Guest: M. G. Peterman, M.D., Milwaukee, Wisconsin

Presiding: Robert M. Carr, M.D., Junction City

## SECTION ON NEUROLOGY

*Hotel Jayhawk, Green Room*

Subject: Psychological Factors in Physical Disease.

Guest: Roy R. Grinker, M.D., Chicago, Illinois

Presiding: William C. Menninger, M.D., Topeka

## SECTION ON OBSTETRICS AND GYNECOLOGY

*Hotel Kansan, Assembly Room*

Subject: Prolonged Labor

Guest: Joseph L. Baer, M.D., Chicago, Illinois

Presiding: R. W. Urie, M.D., Parsons

*Schedule of Events*

## GENERAL SESSION—Main Auditorium

## 1:45 P. M. PRESENT DAY CONCEPTS OF PULMONARY TUBERCULOSIS

*J. A. Myers, M.D., Minneapolis, Minnesota*

We have arrived at the time when we know all that we need to know in order to reduce tuberculosis from a major disease to one of minor importance. If our present methods are increased and intensified, we should see in the next decade or so tuberculosis leave by the same gate as diphtheria and typhoid fever. By the end of 1939 there will not be more than one and possibly no county in the United States that has not been accredited with reference to tuberculosis in its cattle. While the veterinarian slaughters the infected animals and solves the problem quickly, we isolate, treat, and educate. These three methods combined will not solve the problem quite as promptly as the veterinarian's method but will ultimately suffice.

## 2:30 P. M. VARIOUS MANIFESTATIONS OF CEREBRO-ARTERIOSCLEROSIS

*Roy R. Grinker, M.D., Chicago, Illinois*

Cerebro-arteriosclerosis is responsible for many syndromes which may also be caused by other diseases in younger individuals. The differential diagnosis ranges all the way from that of cerebral tumors to functional nervous disorders. The various manifestations are discussed along with the prognosis and therapy.

## 3:15 P. M. INTERMISSION

## 3:30 P. M. MEDICAL CONDITIONS COMPLICATED BY PREGNANCY

*Joseph L. Baer, M.D., Chicago, Illinois*

The modern viewpoint must regard disease as primary and pregnancy as secondary. The treatment of diseases complicated by pregnancy is definitely improved as the result of this approach. The frequency of therapeutic abortion is decreased and the maternal and fetal morbidity and mortality are improved.

## 4:15 P. M. A PEDIATRIC PROGRAM FOR THE GENERAL PRACTITIONER

*M. G. Peterman, Milwaukee, Wisconsin*

When the family doctor delivers a baby he has thereby acquired an enviable place in that family which no other human being can attain. However, he has at the same time accepted a great responsibility, the supervision of the growth and development, and general hygiene of the new member of society. The family doctor who has the confidence of his family has unquestionable priority in the health program of each child and if he is alive to his opportunities, which are his responsibilities, he will leave little or no opportunity for intrusion by crusading health organizations, public or private.



*Schedule of Events*80TH ANNUAL SESSION  
EYE, EAR, NOSE AND THROAT*May, 2, 3, 4*

## TUESDAY MORNING MAY 2

## EYE, EAR, NOSE AND THROAT SECTION

## REGISTRATION—Entrance Lobby Masonic Temple

Open from 8:00 a. m. to 6:00 p. m.

*All meetings of this section in Lodge Room B unless otherwise designated.*

Presiding: Lyle S. Powell, M.D., Lawrence

## 9:00 A. M. THE APPLIED SURGICAL ANATOMY OF THE SINUSES

*Louis J. Birsner, M.D., St. Louis, Missouri*

## 10:45 A. M. INTERMISSION

## 11:00 A. M. THE MANAGEMENT OF MYOPIA

*Avery D. Prangen, M.D., Rochester, Minnesota*

A summary of recent opinions.

## 2:00 P. M. THE APPLIED SURGICAL ANATOMY OF THE SINUSES

*Louis J. Birsner, M.D., St. Louis, Missouri*

## 3:00 P. M. SURGICAL CORRECTION OF STRABISMUS

*Avery D. Prangen, M.D., Rochester, Minnesota*

Particular reference to differential diagnosis and its relation to the selection of the type of operation.

## 4:00 P. M. THE APPLIED SURGICAL ANATOMY OF THE SINUSES

*Louis J. Birsner, M.D., St. Louis, Missouri*

## WEDNESDAY MORNING MAY 3

## 9:00 A. M. MALIGNANT TUMORS OF THE THROAT

*J. M. Martin, M.D., Dallas, Texas**(With the Surgical Section in Lodge Room A)*

## 10:00 A. M. to 12:00—SOME FUNDAMENTAL PROCEDURES IN REFRACTIONS

*Avery D. Prangen, M.D., Rochester, Minnesota**(Return to Lodge Room B)*

Certain rather disconnected but important factors which have a direct bearing on clinical refraction.

3:00 P. M. to 5:00 P. M.—THE SPREAD OF INFECTION FROM THE UPPER  
RESPIRATORY TRACT TO THE BODY*Louis J. Birsner, M.D., St. Louis, Missouri*

80TH ANNUAL SESSION—*Speakers*

JOSEPH L. BAER, M.D.

*Chicago, Illinois*

APPOINTMENTS: Clinical Professor of Gynecology and Obstetrics, Rush Medical College, University of Chicago; Senior Attending Gynecologist and Obstetrician, Michael Reese Hospital.

DEGREE: M. D., Rush Medical College, 1904.

SPECIALTY: Obstetrics and Gynecology.

MEMBER: Board of Directors, American Board of Obstetrics and Gynecology (certificate); Fellow, American Gynecological Society; Fellow, Chicago Gynecological Society; Board of Directors, Plan for Hospital Care; Joint Maternal Welfare Committee of Cook County; Board of Directors, Infant Welfare Society of Chicago; Central Association of Obstetricians and Gynecologists; American College of Surgeons; American Medical Association.

LOUIS J. BIRSNER, M.D.

*St. Louis, Missouri*

APPOINTMENTS: Assistant Professor in Clinical Otolaryngology, Washington University School of Medicine; Instructor in Surgical Anatomy for the Post Graduate School of Ear, Nose and Throat, Washington University, School of Medicine; Visiting Otolaryngologist, Children's Hospital, Barnes Hospital, and Washington University Dispensary.

DEGREE: M. D., St. Louis University School of Medicine, 1915.

SPECIALTY: Otology, Laryngology and Rhinology.

MEMBER: American Academy of Ophthalmology and Oto-Laryngology.



ROY R. GRINKER, M.D.

*Chicago, Illinois*

APPOINTMENTS: Former Associate Professor of Neurology, University of Chicago; Associate Professor of Psychiatry, University of Chicago; Chairman, Department of Neuropsychiatry, Michael Reese Hospital.

DEGREE: M. D., Rush Medical College, 1921.

SPECIALTY: Neurology and Psychiatry.

MEMBER: American Neurological Association; American Association of Neuropathologists; American Psychiatric Association; Central Neuropsychiatric Association.



CLAUDE D. HEAD, JR., M.D.

*Washington, D. C.*

APPOINTMENTS: Passed Assistant Surgeon, United States Public Health Service.

DEGREE: M. D., University of Tennessee, 1929.

SPECIALTY: Public Health.

MEMBER: American Medical Association.



WILL S. HORN, M.D.

*Fort Worth, Texas*

APPOINTMENTS: Staff, Harris Memorial Methodist Hospital; Chief of Staff, Harris Clinic.

DEGREE: M. D., Rush Medical College, 1914.

SPECIALTY: Internal Medicine.

MEMBER: Fellow, American College of Physicians; American Board of Internal Medicine (certificate); American Medical Association.

ARNOLD S. JACKSON, M.D.

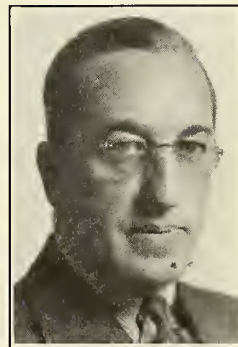
*Madison, Wisconsin*

APPOINTMENTS: Attending Surgeon, Methodist Hospital and Jackson Clinic.

DEGREE: M. D., Columbia University, College of Physicians and Surgeons, 1919.

SPECIALTY: Surgery.

MEMBER: Western Surgical Association; American College of Surgeons; American Board of Surgery (certificate); The American Society for the Study of Goiter; Wisconsin Clinical Surgical Society; The Milwaukee Society of Clinical Surgery; American Medical Association.



*Speakers***JULIUS JENSEN, M.D.***St. Louis, Missouri*

APPOINTMENTS: Assistant Professor of Medicine, Washington University.

DEGREE: M. D., Licentiate of the Royal College of Physicians of London, 1923.

SPECIALTY: Internal Medicine.

MEMBER: Royal College of Surgeons of England; Central Society for Clinical Research; American Medical Association.

**J. M. MARTIN, M.D.***Dallas, Texas*

APPOINTMENTS: Professor of Roentgenology, Baylor University College of Medicine; Radiologist in Chief, Baylor University Hospital.

DEGREE: M. D., St. Louis College of Physicians and Surgeons, 1892.

SPECIALTY: Roentgenology, Radiology.

MEMBER: American Board of Radiology (certificate); American Roentgen Ray Society; Radiological Society of North America; American College of Radiology; American Medical Association.

**J. A. MYERS, M.D.***Minneapolis, Minnesota*

APPOINTMENTS: Professor of Medicine and Preventive Medicine, University of Minnesota; Chief of Tuberculosis Service, Minneapolis General Hospital; Chief of Chest Clinic, Out-patient Department, University of Minnesota; Chairman, Executive Committee, Minnesota Public Health Association; Past-President, National Tuberculosis Association; Chairman, Tuberculosis Committee, American Association of School Physicians; Chairman, Editorial Board, Journal-Lancet.

DEGREE: M. D., University of Minnesota, 1920.

SPECIALTY: Tuberculosis.

MEMBER: American Board of Internal Medicine (certificate); American College of Physicians; American Public Health Association; American Association of Anatomists; American Association for Thoracic Surgery; American Sanatorium Association; American Association of School Physicians; American Association for the Advancement of Science; American Medical Association.





**M. G. PETERMAN, M. D.***Milwaukee, Wisconsin*

**APPOINTMENTS:** Professor of Pediatrics, Marquette University; Medical Director, St. Vincent's Infant Asylum; Staff, Milwaukee Children's Hospital and Columbia Hospital.

**DEGREE:** M. D., Washington University, 1920.

**SPECIALTY:** Pediatrics.

**MEMBER:** American Board of Pediatrics (certificate); American Academy of Pediatrics; Central Society for Clinical Research; Milwaukee Academy of Medicine; American Medical Association; Milwaukee Pediatric Society; International Congress of Pediatrics.

**AVERY D. PRANGEN, M.D.***Rochester, Minnesota*

**APPOINTMENTS:** Consulting Ophthalmologist, Mayo Clinic; Ophthalmic Surgeon, Worrall Hospital; Associate Professor of Ophthalmology, Mayo Foundation, University of Minnesota.

**DEGREE:** M. D., University of Michigan Medical School, 1915.

**SPECIALTY:** Ophthalmology.

**MEMBER:** American Board of Ophthalmology (certificate); American Academy of Ophthalmology and Oto-Laryngology; American Ophthalmological Society; American Medical Association.

**WALTMAN WALTERS, M.D.***Rochester, Minnesota*

**APPOINTMENTS:** Professor of Surgery, The Mayo Foundation, University of Minnesota; Head of a Section in Division of Surgery, The Mayo Clinic.

**DEGREE:** M. D., Rush Medical College, 1920.

**SPECIALTY:** Surgery.

**MEMBER:** American Board of Urology (certificate); American Board of Surgery (certificate); American Surgical Association; Southern Surgical Association; Western Surgical Association; American College of Surgeons; Society of Clinical Surgery; American Urological Association; Central Society for Clinical Research; American Medical Association.



*Speakers*

JOHN A. BORGHOFF, M.D.

*Omaha, Nebraska*

APPOINTMENTS: Associate Professor of Dermatology, Creighton University School of Medicine.

DEGREE: M.D., University of Nebraska, 1920.

SPECIALTY: Dermatology.

MEMBER: American Board of Dermatology and Syphilology; (certificate); American Medical Association.

RALPH G. BALL, M.D.

*Manhattan, Kansas*

DEGREE: M.D., University of Kansas, 1927.

MEMBER: American College of Physicians; American Medical Association.

IVAN R. BURKET, M.D.

*Asbland, Kansas*

DEGREE: M.D., Harvard University Medical School, 1914.

SPECIALTY: Surgery.

MEMBER: American College of Surgeons; American Medical Association.

L. A. CALKINS, M.D.

*Kansas City, Kansas*

APPOINTMENTS: Professor of Obstetrics and Gynecology, University of Kansas.

DEGREE: M.D., University of Minnesota, 1919.

SPECIALTY: Obstetrics and Gynecology.

MEMBER: American Board of Obstetrics and Gynecology, (certificate); American Association of Obstetricians and Gynecologists and Abdominal Surgeons; American Gynecological Society; Central Association of Obstetricians and Gynecologists; American Medical Association; American Association of Anatomists.

HAROLD V. HOLTER, M.D.

*Kansas City, Kansas*

DEGREE: M.D., Northwestern University Medical School, 1928.

SPECIALTY: Obstetrics and Gynecology.

MEMBER: Central Association of Obstetricians and Gynecologists; American College of Surgeons; American Medical Association.

ROBERT P. KNIGHT, M.D.

*Topeka, Kansas*

DEGREE: M.D., Northwestern University Medical School, 1933.

SPECIALTY: Psychiatry.

MEMBER: American Psychoanalytic Association; American Psychiatric Association; Central Neuropsychiatric Association; American Medical Association.

C. G. LEITCH, M.D.

*Kansas City, Missouri*

DEGREE: M.D., University of Kansas, 1927.

SPECIALTY: Pathology.

MEMBER: American Medical Association.

RALPH H. MAJOR, M.D.

*Kansas City, Missouri*

APPOINTMENTS: Professor of Medicine, University of Kansas.

DEGREE: M.D., Johns Hopkins University, 1910.

SPECIALTY: Internal Medicine.

MEMBER: American Board of Internal Medicine (certificate); American Medical Association; Association of American Physicians; American Society for Clinical Investigation; American Clinical and Climatological Association.

DONALD N. MEDEARIS, M.D.

*Kansas City, Kansas*

DEGREE: M.D., Harvard University Medical School, 1927.

SPECIALTY: Pediatrics.

MEMBER: American Medical Association.



## FRANK L. MENEHAN, M.D.

*Wichita, Kansas*

DEGREE: M.D., Rush Medical College, 1930.

SPECIALTY: Pediatrics.

MEMBER: American Medical Association; American Academy of Pediatrics.

## L. S. NELSON, M.D.

*Salina, Kansas*

APPOINTMENTS: Chairman, Defense Board, and Councilor of The Kansas Medical Society.

DEGREE: M.D., University of Kansas, 1919.

SPECIALTY: Surgery.

MEMBER: American College of Surgeons; American Medical Association.

## ALLEN A. OLSON, M.D.

*Wichita, Kansas*

DEGREE: M.D., University of Kansas, 1925.

SPECIALTY: Internal Medicine.

MEMBER: American Medical Association.

## JOHN M. PORTER, M.D.

*Concordia, Kansas*

DEGREE: M.D., Harvard University Medical School, 1926.

SPECIALTY: Internal Medicine.

MEMBER: American Medical Association.

## A. J. REVELL, M.D.

*Pittsburg, Kansas*

DEGREE: M.D., St. Louis University, 1930.

SPECIALTY: Internal Medicine.

MEMBER: American Medical Association.

## HOWARD E. SNYDER, M.D.

*Winfield, Kansas*

DEGREE: M.D., Jefferson Medical College, 1927.

SPECIALTY: Surgery.

MEMBER: National Board of Medical Examiners (certificate); American Medical Association; American College of Surgeons.

## M. TRUEHEART, M.D.

*Sterling, Kansas*

APPOINTMENTS: Councilor, The Kansas Medical Society.

DEGREE: M.D., Kansas City Medical College, 1904.

SPECIALTY: Surgery.

MEMBER: American Board of Radiology (certificate); American College of Surgeons; American Urological Association; Radiological Society of North America; American Radium Society; American Medical Association.

## J. B. WEAVER, M.D.

*Kansas City, Missouri*

DEGREE: M.D., University of Kansas, 1925.

SPECIALTY: Orthopedic Surgery.

MEMBER: American Board of Orthopedic Surgery (certificate); American Medical Association.

## RAY A. WEST, M.D.

*Wichita, Kansas*

APPOINTMENTS: Chairman, Committee on Maternal and Child Welfare, The Kansas Medical Society.

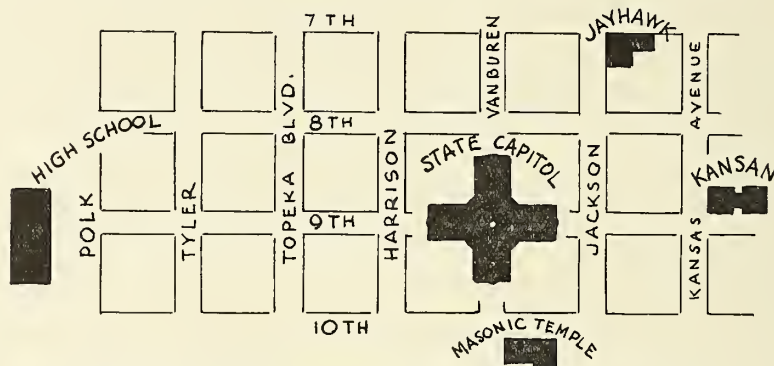
DEGREE: M.D., Rush Medical College, 1919.

SPECIALTY: Obstetrics and Gynecology.

MEMBER: American Board of Obstetrics and Gynecology, (certificate); Central Association of Obstetricians and Gynecologists; American College of Surgeons; American Medical Association.

## PLACE OF MEETING

The Masonic Temple was selected as the place of meeting for the Eightieth Annual Session by reason of its ideal location and its ample space. The building is located at Tenth and Van Buren Streets and faces the south entrance of the State Capitol.



MAP OF TOPEKA STREETS SHOWING LOCATION OF MASONIC TEMPLE AND OTHER MEETING PLACES

All events with the exception of the Round Table Luncheons, Alumni Banquets, House of Delegates Meetings, Annual Banquet, and Golf and Trap Tournaments will be held at the Masonic Temple.

## REGISTRATION

Every member must register before he is entitled to attendance at any of the events of the meeting. There is no registration fee. Only requirement for registration is presentation of a 1939 membership card. Registration by any other means requires certification of the secretary of the county medical society of residence or by an officer of the Society.

Registration headquarters will be immediately inside the North entrance of the Masonic Temple, second floor, and will be open from 8:00 a. m. to 6:00 p. m. each day. Tickets for the Annual Banquet, Round Table Luncheons, etc., will be on sale daily at the Registration Desk. Members are urged to utilize this desk in all ways possible for convenience and assistance. Physicians expecting emergency or urgent calls may leave word at this place and any other service desired will be gladly given upon request. Page service will be available to facilitate the handling of telephone calls and the delivery of communications and telegrams.

## SECRETARIES LUNCHEON

A luncheon for secretaries of county medical societies will be held at 12:15 p. m., Wednesday, May 3, in the Colonial Room of the Kansan Hotel. The program will consist of informal discussion of various important business and organization problems of the county and state Society. All county medical society secretaries are urged to attend this meeting. Tickets will be on sale at the Registration Desk.

## PAGE SERVICE

Several pages will be available at all times during the session, to assist members in all ways possible and to facilitate the handling of telephone calls and urgent communications. Members expecting emergency calls are requested to notify the Registration Desk.



## HOUSE OF DELEGATES

The first meeting of the House of Delegates will be held at 8:30 p.m., Tuesday May second, at the Convention Hall Hotel Jayhawk. The final meeting will convene at 8:30 a.m. on Thursday, May fourth, at the same place.

The Constitution and By-Laws provides that each county medical society shall be entitled to send to the House of Delegates each year, one duly qualified delegate for every twenty members, and one duly qualified delegate for each major fraction thereof; provided that each component society has made its annual report and paid its assessments as provided in the Constitution and By-Laws shall be entitled to at least one duly qualified delegate. In the event that a delegate finds it impossible to attend, the By-Laws provide that he shall appoint an alternate to attend and serve in his place and that each such alternate shall qualify himself to the Committee on Credentials. In the event a particular component society is not represented by either a delegate or alternate at a meeting of the House of Delegates, that body by a majority vote may elect a member of that component society to serve as a delegate for that meeting.

Many matters of extreme importance are scheduled upon the agenda for this year's meetings, and every county medical society is urged to have its delegates or alternates present at both of the meetings.

All interested members of the Society other than Delegates are invited to attend the meetings.

## ALUMNI BANQUETS

The Alumni Banquets will be held on Tuesday evening, May 2. All will commence at 6:30 o'clock. The banquets and meeting places are as follows:

University of Kansas—Jayhawk Hotel Roof Garden

Creighton University—Jayhawk Hotel, Room 300

University of Louisville—Jayhawk Hotel, Room 302

University of Nebraska—Jayhawk Hotel, Room 502

Rush Medical College—Kansan Hotel, Basement Grill

Washington University—Kansan Hotel, Colonial Room

Northwestern University—Kansan Hotel, Assembly Room

Kansas Medical College—Chocolate Shop

University of Iowa

University of Colorado

University of Oklahoma

Kansas City Medical College

University Medical College of Kansas City

Harvard University

Ensworth Medical College

} Kansan Hotel Roof Garden

A combined program has been arranged for these schools. However, separate tables have been provided for each school.

Members whose schools are not shown above are invited to attend the banquet at the Kansan Hotel Roof Garden or any other banquet which they desire to attend.

All banquets will adjourn at approximately 8:30 p.m. in order to permit attendance at the first House of Delegates meeting. Tickets for the banquets may be obtained at the Registration Desk.

## ANNUAL BANQUET AND DANCE

The annual banquet for members and their wives will be presented on Wednesday evening, May 3, at the Topeka High School Cafeteria commencing at 6:30 p.m. Mr. Robert L. Lund, St. Louis, Missouri, will be the guest speaker and his subject will be "The Doctor's Stake in Free Enterprise." Following the banquet, a dance will be held on the roof of the Hotel Jayhawk. Music by Charles Bray and his orchestra.

Tickets will be available at the Registration Desk for \$1.00.

## ROUND TABLE LUNCHEONS

Each noon during the scientific sessions there will be Round Table Discussion groups. These will be held in various rooms of the Hotel Kansan and the Hotel Jayhawk. In order to make the groups small, so that the discussions may be as informal as possible, each of the out-of-state guests will be at a different Round Table Group.

Some of the groups have scheduled topics for discussion, while others are to be devoted entirely to the questions which may be brought up at the time. At any of the groups, questions will be welcomed as it is the prime purpose of such groups as these to straighten out doubts or problems of the individuals, and to promote a better understanding between the members of the profession.

It is hoped that the attendance at these luncheon meetings will be good. Members of the Society are urged to buy their tickets for these meetings not later than the morning of the day of the luncheon, in order that the hotels may have some idea of the number there will be in each group.

See the program for the meeting places, and for the topics for discussion of each group.

## SCIENTIFIC EXHIBITS

Scientific exhibits as usual will be extensive and of interest to all members.

The exhibits will be located in the Main Lobby of the Masonic Temple. An innovation is the addition of a movie room wherein scientific movies will be shown daily at announced times.

Exhibits arranged to date are as follows:

University of Kansas Medical School, Kansas City.

University of Kansas Medical School, Lawrence.

American Medical Association.

Kansas State Sanatorium for Tuberculosis, Norton.

Kansas Tuberculosis and Health Association.

Kansas State Dental Association.

Kansas Medical Auxiliary.

Kansas State Pharmaceutical Association.

Kansas State Board of Social Welfare.

Kansas State Board of Health.

Kansas State Hospital Association.

Metropolitan Life Insurance.

Dr. Charles Rombold, Wichita, "Rupture of the Medial Meniscus," glass slides.

Dr. Galen M. Tice, Kansas City, "Radiation Therapy of Malignancy."

Dr. Wilfred Cox, Wichita, "Adrenal Cordical Syndrome Pseudo-sexual Precocity in Girl Three Years of Age."

Dr. G. Wilse Robinson, Kansas City, "Delirium—Acute and Chronic."

Dr. Maurice Snyder, Salina, "Coronary Thrombosis." Charts and models.

Dr. James D. Bowen, Topeka, "Intravenous Anesthesia."

Dr. M. E. Pusitz, Topeka, "Spastic Paralysis."

Dr. Don C. Wakeman, Topeka, "Electrocardiography."

Dr. Thomas P. Haslam, Council Grove, "Laboratory Procedures in Edema."

Southard School—General exhibit.

## TECHNICAL EXHIBITS

Technical exhibits will also be located in the Main Lobby of the Masonic Temple.

Approximately forty exhibits, including the following concerns, will attend:

American Optical Company, Southbridge, Massachusetts.

General Electric X-Ray Corporation, Chicago, Illinois.

George A. Breon & Company, Inc., Kansas City, Missouri.



Topeka Pure Milk Company, Topeka, Kansas.  
 Westinghouse X-ray Company, Inc., Kansas City, Missouri.  
 Cole Chemical Company, Wichita, Kansas.  
 The Denver Chemical Manufacturing Company, New York, New York.  
 Riggs Optical Company, Kansas City, Missouri.  
 The Zemmer Company, Pittsburgh, Pennsylvania.  
 M & R Dietetic Laboratories, Inc., Columbus, Ohio.  
 Holland-Rantos Company, Inc., New York, New York.  
 The Coca-Cola Company, Atlanta, Georgia.  
 Burroughs Wellcome & Company, Inc., New York, New York.  
 A. J. Griner Company, Kansas City, Missouri.  
 C. B. Fleet Company, Inc., Lynchburg, Virginia.  
 Lederle Laboratories, Inc., New York, New York.  
 W. E. Isle Company, Kansas City, Missouri.  
 Quinton-Duffens Optical Company, Topeka, Kansas.  
 H. G. Fischer & Company, Chicago, Illinois.  
 Eli Lilly & Company, Indianapolis, Indiana.  
 Jones Metabolism Equipment Company, Chicago, Illinois.  
 J. B. Lippincott Company, Philadelphia, Pennsylvania.  
 A. S. Aloe Company, St. Louis, Missouri.  
 Parke, Davis & Company, Detroit, Michigan.  
 Gerber Products Company, Fremont, Michigan.  
 Midwest Surgical Supply Company, Inc., Wichita, Kansas.  
 Philip Morris & Company, Ltd., New York, New York.  
 Medical Protective Company, Wheaton, Illinois.  
 Mead Johnson & Company, Evansville, Indiana.  
 Petrolagar Laboratories, Inc., Chicago, Illinois.  
 H. J. Heinz Company, Pittsburgh, Pennsylvania.

All booths and decorations will be furnished by a professional decorating firm—Fillmore and Bradbury of Minneapolis, Minnesota. Intermissions have been provided in the program for an opportunity to visit the technical exhibits. Kansas is fortunate in the number of technical exhibits it is able to secure for its annual meetings and all members are urged to remember that technical exhibits make possible the presentation of large and complete annual sessions; they appreciate registration at their booths; and that they also appreciate an opportunity to discuss and show their exhibits.

## STAG BANQUET

In the evening following the Golf and Trap Tournaments, (Monday, May 1) the annual banquet of the Kansas Medical Golfing Association and Kansas Medical Trap Shooting Association will be held at the Topeka Country Club commencing at 6:30 p.m. The prizes won at the tournaments will be presented at this time and an entertaining program has been provided.

All members of the Society, regardless of whether or not they participated in the golf and trap events are invited to attend the banquet.

## ANNUAL TOURNAMENT FOR ALL GOLFERS AND SHOOTERS

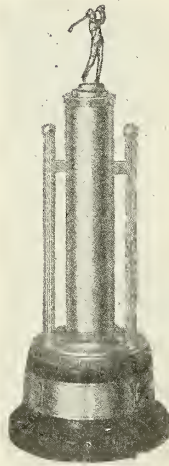
The Kansas Medical Golfing Association and the Kansas Medical Trap Shooting Association will hold its regular annual tournament for all golfers, trap and skeet shooters, at the Topeka Country Club and the Izaak Walton Gun Club in Topeka, Kansas, on Monday, May 1, 1939. This big day of sports activities will be climaxed by the usual stag banquet, which will be served in the dining room of the Club House.

If you are not already a member of our golfing and trap shooting association, this is an

official invitation for you and every member of The Kansas Medical Society to get out your old golf clubs or shotgun, and join us at the Topeka Country Club on Monday, May 1st, for a grand and glorious day of sports, relaxation and good fellowship.

E. M. SUTTON, M.D., Secretary.

## GOLF AND TRAP SHOOTING TOURNAMENTS



QUINTON-  
DUFFENS  
TROPHY

The annual tournaments of the Kansas Medical Golfing Association and the Kansas Medical Trap Shooting Association will be held on Monday, May 1. The Golf Tournament will be at the Topeka Country Club which is located at 27th and Buchanan Streets. (South on U. S. Highway 75 on Topeka Boulevard to 27th Street). The Trap Shooting Tournament will be held at the Izaak Walton Gun Club which is approximately three miles east of Topeka. (Follow U. S. Highway 40 east to sign pointing south.) Both tournaments will commence at 8:30 a.m.

The Golf Tournament will be an eighteen-hole tournament and prizes will be awarded accordingly on the basis of scores turned in. The Trap Tournament will consist of both skeet and straight target shooting. Prizes will be awarded for both events as well as high gun prizes. A sufficient number of prizes have been procured to assure all shooters of a prize.



MEAD JOHNSON GOLF  
TROPHY



MEAD JOHNSON TRAP  
SHOOTING TROPHY



## HOTEL ACCOMMODATIONS

Topeka has ample hotel accommodations. A suggestion is made though if you have not already made a hotel reservation that you do so at once. The names of Topeka hotels, their locations and their rates are as follows:

Hotel and Location	Single	Double	Twin Beds	Four Persons
<b>JAYHAWK</b>				
Seventh and Jackson	\$2.00	\$3.00	\$4.50	
4 blocks from	to	to	to	\$6.00
Masonic Temple	\$3.00	\$5.00	\$5.00	
<b>KANSAN</b>				
Ninth and Kansas	\$1.50	\$2.00	\$3.00	\$4.00
3 blocks from	to	to	to	to
Masonic Temple	\$2.50	\$3.50	\$5.00	\$5.00
<b>CAPITOL</b>				
Fifth and Kansas	\$1.25	\$1.75		
7 blocks from	to	to		\$4.00
Masonic Temple	\$2.00	\$3.00		
<b>THROOP</b>				
Fourth and Kansas	\$1.00	\$2.00	\$2.00	\$3.00
8 blocks from	to	to	to	to
Masonic Temple	\$1.50	\$2.50	\$4.00	\$6.00
<b>COMMERCE</b>				
612 Kansas	\$1.00	\$1.50		\$3.00
6 blocks from	to	to	\$2.25	to
Masonic Temple	\$1.25	\$2.00		\$4.00
<b>REID</b>				
Fourth and Kansas	\$1.00	\$1.50	\$2.00	\$3.00
9 blocks from	to	to	to	to
Masonic Temple	\$1.50	\$2.50	\$3.00	\$4.00
<b>COLONIAL</b>				
222 East Fifth	\$0.75	\$1.50		
9 blocks from	to	to	\$2.00	\$2.00
Masonic Temple	\$1.00	\$2.00		

If any difficulties are experienced in obtaining adequate reservations either before or upon arriving in Topeka, Dr. Harry J. Davis, 704 Mills Building, Topeka, Chairman of the Committee on Accommodations, will be glad to offer assistance.

## SHAWNEE COUNTY COMMITTEES

All arrangements for the 80th Annual Session have been made by the following committees of the Shawnee County Medical Society:

Dr. J. L. Lattimore, *General Chairman*

Dr. M. B. Miller, *Treasurer*

### PROGRAM

Dr. L. R. Pyle, Chairman  
Dr. L. E. Eckles  
Dr. J. G. Stewart  
Dr. O. R. Clark  
Dr. W. W. Reed  
Dr. H. W. Powers

### SCIENTIFIC EXHIBITS

Dr. F. C. Taggart, Chairman  
Dr. A. J. Brier  
Dr. Leo Smith  
Dr. S. H. Boyd

### COMMERCIAL EXHIBITS

Dr. J. T. Hunter, Chairman  
Dr. O. M. Raines  
Dr. C. E. Joss  
Dr. B. J. Ashley

### ARRANGEMENTS

Dr. Guy Finney, Chairman  
Dr. J. D. Bowen  
Dr. D. C. Wakeman  
Dr. L. A. Curry

### GOLF AND TRAP SHOOT

Dr. E. H. Decker, Chairman  
Dr. H. T. Morris  
Dr. B. I. Krehbiel  
Dr. F. L. Loveland  
Dr. F. C. Boggs  
Dr. R. J. Miller

### BANQUET-ENTERTAINMENT

Dr. H. L. Kirkpatrick  
Dr. G. L. Kerley  
Dr. L. L. Saylor  
Dr. H. H. Woods

### ACCOMMODATION

Dr. Harry J. Davis, Chairman  
Dr. G. F. Helwig  
Dr. C. K. Schaffer

### PUBLICITY

Dr. H. L. Clark, Chairman  
Dr. P. M. Powell  
Dr. H. B. Talbot

Topeka--May 2, 3, 4

General Arrangements—Mrs. James D. Bowen  
Registration—Chairman, Mrs. Richard M. Boyd  
    Mrs. R. L. Funk  
    Mrs. W. H. Elkins  
    Mrs. W. C. Menninger  
Tea—Chairman, Mrs. H. H. Woods  
    Mrs. C. E. Joss  
    Mrs. W. W. Reed  
    Mrs. Leo Smith  
    Mrs. C. B. VanHorn  
Luncheon—Chairman, Mrs. Ransley Miller  
    Mrs. Karl Menninger  
    Mrs. R. M. Boyd  
    Mrs. G. W. B. Beverly  
    Mrs. F. E. McCord  
    Woman's Club Meeting—Chairman, Mrs. C. B. VanHorn  
    Fashion Show—Mrs. Clovis Bowen  
Music—Mrs. Fred Casto  
Exhibits—Mrs. B. G. Dyer  
Tickets—Mrs. Leo Smith  
Publicity—Mrs. G. L. Kerley  
Flowers—Chairman, Mrs. F. C. Taggart  
    Mrs. G. L. Kerley  
Transportation—Ch'm Mrs. Fred Casto  
    Mrs. G. R. Blackburn  
    Mrs. W. J. Walker  
    Mrs. C. F. Attwood  
    Mrs. G. K. Musson  
    Mrs. F. P. Helm  
    Mrs. M. E. Pusitz  
    Mrs. L. A. Curry  
    Mrs. O. F. Marcotte



## PRESIDENT'S PAGE

To the Members of The Kansas Medical Society:

Words cannot adequately express the feelings I possess for all the members of our Society, for their indulgence, their kindness, their loyal support, their kindly cooperation and their willingness to serve and share responsibility. I would be happy if this, my last effort and opportunity to write a President's Page, would convey my appreciation and thanks.

It is true this past year has been rather strenuous, but the contacts that were made and the inspiration and timely counsel and assistance received from the Officers, the Council, our Past Presidents and individual members, shall remain with me always as the richest experience of my entire life.

The recent controversy in the last legislature concerning the Medical Practice Act has proved that The Kansas Medical Society can work and pull together when they have an objective and when the cause is just. Without this cooperation we would have failed.

We all agree that the interest and success of our Society has been greatly enhanced since employing a full-time executive secretary, and too, the various problems are becoming so complex we could not get along without one.

I shall never be able to say enough for our Executive Secretary, Clarence G. Munns, for his ceaseless and untiring efforts, his uncanny ability in sensing the problems of our Society, and his outstanding diplomacy and strategy in legislative problems. We are indeed fortunate to have such a man.

The 80th Annual Meeting of our Society should be a joyous one, not only because of our recent victory, but because Shawnee County Medical Society has extended itself to give us an excellent scientific program and plenty of entertainment. We are anticipating the greatest attendance in the history of Kansas medicine.

At this meeting, without any equivocation, I gladly give the reins of authority as President to my successor, Dr. C. C. Nesselrode, who for many years has been a most active participant in the affairs of the Society. I doubt if any other member is more familiar with its problems, and as to his sincerity, earnestness and capability for the betterment of the Society, you know as well as myself. To me during the past year his assistance and counsel was most helpful and appreciated and I feel you will extend to him the same loyal support that I have enjoyed.

To have been President of The Kansas Medical Society the past year has been a great honor, and I appreciate it. For the mistakes made I ask your forgiveness and for any success attained I thank you for your assistance.

N. E. MELENCAMP, M.D., *President.*

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## EDITORIAL

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### THE RETIRING PRESIDENT

Dr. N. E. Melencamp may look with pride to the accomplishments of the Society during his year as president.

His year as president was not an easy one, but rather one of the most difficult any president of the Society has ever experienced. He did, however, display profound wisdom and ability in all of his decisions, and also in many other ways he fully sustained the confidence the membership placed in him when they entrusted the presidency to his care.



As every member knows, one of the most difficult problems which confronted Dr. Melencamp was the attempt of the osteopaths to enter the practice of medicine and surgery. The definition of osteopathic rights of practice in the case of *State v. Gleason* was handed down within a month after Dr. Melencamp took office, and from that time to the present there has been no cessation in the efforts of that group to find a way to expand their scope of practice. The climax of these attempts came in the 1939 legislature when the osteopaths tried in every way within their command to force the State of Kansas to accept a double standard of medicine and surgery. The outcome makes self-evident the good judgment and the able leadership provided by the retiring president.

Several other happenings in the legislature were also of particular interest to the medical profession. A naturopathic bill, wide in latitude and filled with many opportunities for unskilled cult practice, was killed. A chiropractic measure which would have furthered utilizing state law as a means of collecting association dues was also killed. An optometry measure which is apparently beneficial to the public in the raising of standards for the practice of optometry, and in eliminating other unsatisfactory conditions in the fitting of eye glasses was passed. A law was also passed wherein Kansas hospitals will be extended liens in instances of judgments and other payments wherein hospitals have a claim for services rendered. Approximately fifty other measures were introduced or considered which would have influence on public health and the practice of medicine and surgery in this state.

Several important happenings in the field of medical economics occurred during the year. The Kansas State Board of Social Welfare in cooperation with the Society issued a report and recommendation on the subject of indigent medical care which well incorporated the ideals of good medical practice in that regard. Further progress made in this direction is shown by the fact that sixty-one counties in the state at the present time have free choice plans for provision of medical care to needy persons. Extensive study was made on the subjects of group hospitalization and pre-payment medical care for low-income groups, and arrangements have been made for a series of experiments to be conducted on these topics in various parts of the state. The Kansas State Board of Social Welfare, the Kansas State Board of Administration, and the Kansas State Board of Health were assisted materially in the conduct of their work relating respectively to treatment of the blind, state institutions, and public health. The Kansas medical profession takes pride in the fact that it was able to assist these important agencies in many ways.

Post-graduate activities were furthered and increased during the year. State-wide courses in cancer, tuberculosis, venereal disease, obstetrics and pediatrics were conducted, and a large number of other local and district programs were presented. Likewise, Society committees and several other agencies were instrumental in making available to



the membership movies, brochures, and loan packets on scientific subjects, and in issuing recommendations and procedures wherein scientific work will be furthered.

Continued progress was made with lay education and preventive medicine programs and Kansas was able to offer substantial improvement in most all causes of morbidity and mortality.

The committee work of the Society continued on the high plane which has existed in previous years. Dr. Melencamp held a conference of committee chairmen early in his administration, and each committee was given a definite program which it was asked to accomplish. Almost without exception every committee met and attempted to further the program to which it was assigned. New committees were appointed on heart disease and automobile accidents to study and provide assistance in these fields.

The Board of Medical Registration and Examination expanded its organization and facilities through the employment of an attorney and the establishment of arrangements for a permanent staff of investigators. Many opportunities for improvement and enforcement of the laws governing medical practice will be available through this medium. Many other accomplishments may be cited: The Auxiliary commenced projects wherein public health exhibits will be presented at state and county fairs, approved books on public health and medicine will be placed in public libraries, and increased talks on lay medical and public health topics will be presented to state and local women's groups; study and recommendations were made on the lay x-ray technician problem, the lay laboratory technician problem, and the lay anesthetist problem; material assistance was given the Kansas Women's Field Army for the Control of Cancer, and much other help was provided on the subject of cancer; study and recommendations were made on the subject of medical research and medical endowment; assistance was given to the Kansas Society for Prevention of Blindness and to other worthwhile agencies in reducing the incidence of blindness and in the conservation of eyesight; arrangements were made to study heart disease in Kansas, to standardize the reporting of heart disease morbidity and mortality, and to find ways wherein this leading cause of death may be reduced; assistance was provided to the Kansas Hospital Association, and an

extensive survey of Kansas hospital needs and facilities was completed, and certain laboratory and other hospital equipment was provided in various parts of the state; study was made of maternal and infant morbidity and mortality statistics in the state, of quarantine regulations, of the reporting of communicable diseases, and of immunization and vaccination; arrangements were made for furtherance of the activities of the Kansas Council of Public Health, and for study of the Kansas pure food and drug laws, the dispensing problem, the barbiturate problem, and the counter-prescribing problem; closer relations were established with the University of Kansas Medical School and the medical school was assisted in the handling of various subjects; work in the fields of tuberculosis and venereal disease were materially furthered.

A review of the above record and the progress made during the last year indicates beyond doubt that the Society acted wisely when it elected Dr. Melencamp as president. Those who worked closely with him know that he placed the Society first among his activities during the year, and that he was more than willing to make any trip or to undergo any inconvenience which he felt would expedite its work and interests. The Journal takes pleasure in extending him the following tribute which it believes is shared by every doctor of medicine in Kansas—that he was an excellent president.

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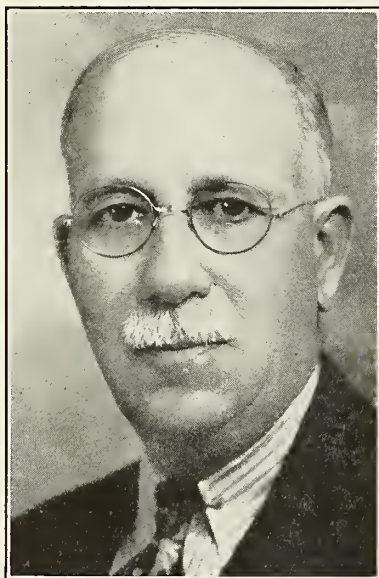
## THE NEW PRESIDENT

The Kansas Medical Society takes pleasure in welcoming Dr. C. C. Nesselrode of Kansas City as its seventy-seventh president.

Dr. Nesselrode is not only a physician of recognized ability, whom the Society is proud to have as its chief representative, but he also has had a vast amount of experience in the work and programs of the organization. He was a member of the Executive Secretary Committee which employed an executive secretary and instituted the present central office plan of the Society. He has been chairman of the Society Committee on Control of Cancer continuously since 1915, and in that position has enabled Kansas to take pride in the fact that it has one of the most efficient cancer programs in the United States. He has also served the Society in many other official ca-

pacities. His extensive experience in Society work and his many capabilities well equip him to assume the most distinguished and important position which the Society has in its power to give.

Dr. Nesselrode was born in 1880. He received his medical education at the University of Kansas School of Medicine, from which he graduated in 1906. He is a Diplomate of the American Board of Surgery and he is also an Associate Professor of Surgery at the University of Kansas School of Medicine.



In addition to membership in Kansas county and state medical organizations, he is a Fellow of the American Medical Association, a Fellow of the American College of Surgeons and a member of the Western Surgical Association.

The Kansas Medical profession looks forward with confidence and esteem to Dr. Nesselrode's year as President, and pledges him its utmost assistance.

## EIGHTIETH ANNUAL SESSION

The Shawnee County Medical Society takes pleasure in extending each and every member an invitation to attend the Eightieth Annual Session of the Society.

The scientific program will present some of the best informed physicians in the country and particular effort has been made toward selecting subjects on the program which will be of equal interest to the general practitioner and the specialist. The scientific and technical exhibits will be among the

largest in the history of the Society. The round table luncheons will be continued on the same basis as in recent years. The alumni banquets, the annual banquet, the golf and trap tournaments, and all of the other usual events of Kansas annual meetings will be presented. In addition to this, several new events have been planned. Topeka hotel facilities are adequate and the Masonic Temple affords an ideal meeting place.

The Shawnee County Medical Society hopes that you can attend. It believes you will have a good time and that the opportunity presented for post-graduate study will make your attendance a worthwhile investment.

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## OFFICIAL PROCEEDINGS

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### FOREWORD TO DELEGATES

*Since the agenda of the House of Delegates has increased appreciably during recent years, an attempt has been made this year to save time necessary for reading of reports by publishing in advance as many of these as possible.*

*All of the following reports will be discussed and presented for adoption but since they will not be read all delegates are requested to become familiar with them in advance of the meeting.*

The following is the report of the Councilor of the First District:

#### TO: THE HOUSE OF DELEGATES

The medical situation in the First District is very satisfactory. The district is well organized, and the medical societies are functioning in every county.

Numerous meetings have been held, and a great deal of individual work has been done by the doctors of this area.

Respectfully submitted,

R. T. Nichols, M.D., Councilor, First District.

The following is the report of the Councilor of the Third District:

#### TO: THE HOUSE OF DELEGATES

We have had cooperation among our members in the Third District. I am sorry that I cannot report 100 per cent membership. Our members, however, have responded very beautifully to all requests for assistance.

Respectfully submitted,

L. D. Johnson, M.D., Councilor, Third District.



The following is the report of the Councilor of the Fourth District:

TO: THE HOUSE OF DELEGATES

During the past year, each component society has been unusually active and loyal to the state Society. At each call of the Councilor or officers of the Society, a ready response has been received by each society. Of approximately 175 members in the district, 153 have paid their special assessment. On three occasions during the past year, officers of each society have come to Topeka for special meetings of the Councilor with the officers. Each society in the district is well organized and conducts scientific and business meetings. There are approximately only five eligible physicians in the district that are not members of the Society.

Respectfully submitted,

J. L. Latimore, M.D., Councilor, Fourth District.

The following is the report of the Councilor of the Fifth District:

TO: THE HOUSE OF DELEGATES

During the past year your Councilor visited most of the medical societies in his district and had several meetings with the presidents and secretaries of the societies in the district relative to the legislative situation then present in Topeka. Have made a number of trips for personal interviews with officers of the societies in this district as well as numerous telephone calls and several trips to Topeka.

Am happy to report that the lines in the Fifth District held well during the recent combat.

Respectfully submitted,

M. Trueheart, M.D., Councilor, Fifth District.

The following is the report of the Councilor of the Seventh District:

TO: THE HOUSE OF DELEGATES

Republic County, no report; Mitchell County, no report; Cloud County, no report; Washington County, no report; Jewell County, no report; Riley County reports a membership of twenty-three with most members paid up for the year. Clay County reports a 100 per cent membership for the year. The county society has had regular meetings throughout the year, usually with an out-of-town guest speaker. They sponsored a county-wide diphtheria immunization for all unimmunized children and 853 children were immunized. It is the first time this has been done since 1934.

Respectfully submitted,

F. R. Croson, M.D., Councilor, Seventh District.

The following is the report of the Councilor of the Eighth District:

TO: THE HOUSE OF DELEGATES

It is not our intention to review in much detail the activities of this district during the past year for two principle reasons: (1) Those members who are interested know what has happened during the past year within this district; (2) it seems far more important to ask each member to cast a glance into the future in order that our part in the general plan for the ensuing year will reflect all of the wisdom which can emanate from a combination of individual opinions.

Briefly, letters have gone to all of the societies in this district and visitations have been made, as far as possible. Valued assistance in the latter came from members of the Saline County Medical Society without whose help much could not have been done. For this and the many helpful ways in which various doctors within the Eighth District have cooperated in the work of The Kansas Medical Society for the past year, we wish to extend our sincere thanks.

Our generation of Kansas physicians has had a baptism into the intricacies and vagaries of legislative procedure, which, though regrettable because we would rather spend our time in scientific pursuits, nevertheless has its recompense in drawing us closer together in a common purpose which we know to be right. Mistakes have been made, surely, but we hope to profit by them and the will of the majority has prevailed. This we believe to be sincerely needed and it is to be remembered that our own ideas may be good, and certainly should be expressed, but that majority rule must prevail and that all must play the game, regardless. Therefore, let us all contribute our ideas and then abide by the decision of the majority. The responsibility for future legislation and osteopathic relations is heavy upon us.

Respectfully submitted,

L. S. Nelson, M.D., Councilor, Eighth District.

The following is the report of the Councilor of the Ninth District:

TO: THE HOUSE OF DELEGATES

Paid-up memberships, thirty-five; total paid assessments, thirty-two; number of deaths, none; number of new members, one; number of members dropped due to change of residence or affiliation with other societies, eight; number of meetings, three; post-graduate meetings at Norton, 4; at Colby, 4; Dr. S. S. Glasscock of Brewster, Kansas, was given an honorary membership at the October meeting. This district is at present working on the Farm Security program which will probably be adopted in the near future.

Respectfully submitted,

W. Stephenson, M.D., Councilor, Ninth District.

The following is the report of the Councilor of the Twelfth District:

TO: THE HOUSE OF DELEGATES

Our members have been quite active during the past year. There are very few doctors in the district who are not identified in its societies and who have not been cooperative in matters of mutual professional interest.

The constantly growing interest of the populace, or politicians, in the welfare of others and the strained economic state of our territory plus an interest in medicine itself led to the organization of the district into a society—The Twelfth District Medical Society. The primary object of this society is for the consideration of social and economic topics as related to medicine. There have been four well attended meetings this year. A study has been made of the F.S.A. insurance plan. It will probably be adopted for one year's trial.

The Ford County, Finney County and Meade-Seward Societies have been functioning well, and have had many good meetings.

Respectfully submitted,

G. O. Speirs, M.D., Councilor, Twelfth District.

The following is the report of the Committee on Control of Tuberculosis:

TO: THE HOUSE OF DELEGATES

The work of the Committee on Control of Tuberculosis has gone along uneventfully throughout the year and I am glad to be able to report friendly cooperation on the committee and in the work throughout the state between the medical profession, the State Board of Health, the Kansas Tuberculosis and Health Association and the Norton Sanatorium. All of these groups are cooperating with each other and with mutual benefit.

The various problems associated with pneumothorax treatment including training of physicians in giving pneumothorax if desired at the Norton Sanatorium, a standard minimum price for pneumothorax, and a study of pneumothorax facilities has been made.

Likewise, a minimum price has been arranged after consultation with the x-ray men in the state with regard to chest films for indigent patients in suspected tuberculosis cases, the funds for this being supplied through the Kansas Tuberculosis and Health Association and its branches.

The additional beds of the sanatorium in Norton have now been opened which will relieve for some time the long waiting list for tuberculosis cases. A study of further sanatorium needs in the state has been made by the committee and the report forwarded to the Governor of the State and the State Board of Administration.

Professional education in tuberculosis has been added by the furnishing of speakers on various medical problems at the expense of the Kansas Tuberculosis and Health Association.

Tuberculin testing programs have been carried out through cooperation of the local profession and the state and local health departments.

It is hoped and expected that the spirit of cooperation in this work will continue.

Respectfully submitted,

Henry N. Tihen, M.D., Chairman, Committee on Control of Tuberculosis.

The following is the report of the Committee on Conservation of Eyesight:

TO: THE HOUSE OF DELEGATES

The committee had previously established cordial relationships with the State Board of Social Welfare and the State Board of Administration. These relationships were continued and the greatest of cooperation has existed throughout the year.

The committee at its meeting on September 25, 1938, voted to offer their services to the Board of Social Welfare, Division for the Blind, as Advisory Medical Board. The closest cooperation has been maintained throughout the year with the State Ophthalmologist and the different lay societies representing the interests of the blind and those interested in the prevention of blindness.

The possibilities of post-graduate instruction in eye diseases has been discussed and tentative plans laid for such a program.

The committee has made special efforts for providing additional sight saving classes and has given considerable legislative aid to both the legislators and the representatives of organizations interested in conservation of eyesight.

The distribution of the instructional leaflets prepared by this committee and issued by the State Board of Social Welfare has been continued to good advantage.

The committee has carried on the Eye, Ear, Nose and Throat section in the Journal of the Kansas Medical Society

and is attempting to stimulate interest among the eye, ear, nose and throat men of the state in the preparation of case reports, clinical research and investigative medicine.

Committee members have attended meetings with members of similar committees of other states and the state ophthalmologists of other states and has maintained personal and correspondence relationships with the head of the Social Security program in Washington, D. C.

At the request of Dr. R. P. Wilson of the Memorial Ophthalmic Laboratories of Giza, Egypt, considerable data was furnished from existing records on Ophthalmia Neonatorum. This material is to be used by Doctor Wilson in his report on Ophthalmia Neonatorum at the meeting of International Congress of Ophthalmology in London, England.

Respectfully submitted,

Lyle S. Powell, M.D., Chairman, Committee on Conservation of Eyesight.

The following is the report of the Committee on Hospital Survey:

TO: THE HOUSE OF DELEGATES

On January 29, 1939, the Kansas State Hospital Association Executive Committee held a conference with the Medical Economics Committee pertaining to group hospitalization. There were two definite proposals pertaining to an accepted group hospital plan, should such an association be formed by the hospitals of Kansas. Under (1) have as the standard for such a plan those requirements adopted by the American Hospital Association, and (2) that no physician services be included. Under the second proposal x-ray and laboratory services could not be included in the plan other than what is considered a routine laboratory procedure where hospitals own the laboratory—such as one blood count and urinalysis.

One of the important features, should such a group insurance hospital association plan be formed in Kansas, is to work out some system whereby the association would be working on a service plan rather than an insurance plan, thus relieving the necessity of a reserve deposit required by the insurance commissioner.

In this section the Medical Economics Committee passed the following resolution: That we approve the principle of state-wide non-profit hospital care insurance provided that the standards for such plan as stated by the American Hospital Association are met and that physician's services are not included.

Up to the present time nothing definite has been done by the Kansas State Hospital Association in the way of organizing a group hospital insurance plan or a hospital association service plan. However, such a service is being demanded by many individuals over the state and many hospitals feel much in need of the adoption of such a state-wide plan.

The following measure was enacted into law by the 1939 session of the Legislature:

"An act giving the operator of a hospital in this state a lien upon all causes of action for damages accruing to a patient therein, or to the legal representatives of such patient, for the reasonable charges for hospital care necessitated by the injuries giving rise to such causes of action."

This law is now operating in fifteen states and will be very helpful in the elimination of much financial loss incurred by hospitals for services rendered in automobile accident and emergency cases.

The various committee members and officers of The Kansas Medical Society have cooperated greatly in the passage of



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the above Lien Law. Also in the passage of the proposed legislation involving the protection of hospitals in the purchase of tax-free alcohol, and compensation legislation.

I think these are the high lights of what was accomplished, not particularly by the Committee on Hospital Survey, for the reason that all attempts on former occasions failed to succeed in any amount of attendance and has really been the work of some of the officers of the Kansas State Hospital Association in connection with The Kansas Medical Society. I regret exceedingly that more has not been done, but I am sure that you fully realize that the State Medical Society's interests and individual interests of the professional men have been directed along channels of greater interest.

Respectfully submitted,

A. R. Hatcher, M.D., Chairman, Committee on Hospital Survey.

The following is the report of the Committee on Pharmacy:

#### TO: THE HOUSE OF DELEGATES

Your Committee on Pharmacy held its annual committee meeting at the Jayhawk Hotel, Topeka, Kansas, January 29, 1939, with Drs. Duvall, Ungles and Moore present—Drs. Brier and Lutz being unable to attend.

At the committee meeting held in Topeka last fall with Dr. Melencamp presiding, the following problems were suggested and adopted by this committee:

- (1) Cooperation with the Kansas Council of Public Health.
- (2) Study of the Kansas Pure Food and Drug Laws.
- (3) Study of Dispensary Problems.
- (4) Study of Counter-prescribing Problems.
- (5) Study of the Barbiturate Problem.

There was not a great deal done on the suggested problems. However, we do feel that this committee has been of some value to the Society. The dispensary and counter-prescribing problems were discussed in the group and in conjunction with the Committee on Pharmacy of the Pharmaceutical Association. It was decided that considerable more time would be required before anything of material benefit could be gained or worthwhile suggestions could be offered. These problems are not critical to either group, but they are present and are undesirable to both groups.

A measure controlling the sale of barbiturate acid compounds failed to pass in the 1939 session of the Legislature. I should suggest that the committee next year delve further into this problem and attempt to have something concrete and constructive for presentation at the Legislative Session of 1941 that will also have the approval of the Kansas Pharmaceutical Association. This is a mutual problem and should be treated as such.

Your committee met with the other members of the inter-professional groups January 29, 1939, at the Jayhawk Hotel, Topeka, Kansas.

The interprofessional group reorganized, electing Mr. Kelsey Petro, of Topeka, of the Pharmaceutical Committee, as chairman, and Dr. Leon Kramer, of Topeka, of the Kansas State Dental Association, as secretary.

The following legislative problems were discussed and opinions expressed:

Senate Bill No. 59, regarding the abolition of all boards, the funds of which were to be transferred to the general fund, these committees receiving their finances from appropriations by the Legislature. This bill, while desirable for some boards was not considered desirable for the self-sustaining boards, and it was recommended that those sec-

tions pertaining to the self-sustaining boards be deleted from the bill.

Senate Bill No. 13, the barbiturate control bill was discussed as mentioned hereinbefore, with the recommendation that the chairman be authorized to appoint a committee composed of two pharmacists, two dentists, the Dean of the Veterinary Department of the State Agricultural College at Manhattan, and two Doctors of Medicine to work out a bill covering the barbiturate problem.

The injunction bill was touched upon and the group pledged support of this bill.

Your committee has attempted to work with Dr. E. C. Duncan and Committee on Public Policy, taking our instructions and advice from him as to how we might best be of service to this committee.

At the last House of Delegates meeting in Wichita, it was decided that this committee should be maintained another year. It is my personal opinion, after having served for two years as chairman of this committee that it should still be maintained a temporary committee until we can prove to the Society that this association with the other member groups is going to be a pleasant and a profitable one.

Your committee wishes to express thanks to Mr. Clarence Munns, our Executive Secretary, for his splendid cooperation and helpful advice during the past year. Without his services this committee would have been handicapped materially.

As chairman of this committee, I wish to thank each individual member for his work and for his attendance of our meetings.

Respectfully submitted,

Robert H. Moore, M.D., Chairman, Committee on Pharmacy.

The following is the report of the Committee on Public Policy:

#### TO: THE HOUSE OF DELEGATES

For several years our committee has endeavored to keep up a series of meetings and contacts that should and does, at critical times, produce immense returns.

We have had our hands in, not only the major bill before the Legislature, but many others of lesser importance. We are now getting good cooperation from many groups which heretofore have been more or less unfriendly towards us.

My committee has at all times cooperated to the fullest extent with all the officers of the Society.

It is my belief that our main objective in the next year or two is to continue our frank newspaper articles at regular intervals. We believe the people are entitled to know the profession's attitude on matters affecting the public's health.

Respectfully submitted,

Edgar C. Duncan, M.D., Chairman, Committee on Public Policy.

The following is the report of the Committee on Control of Cancer:

#### TO: THE HOUSE OF DELEGATES

Your Committee on Control of Cancer wishes to report a continuation of their educational program. In the month of September, 1938, Dr. Nathan Womack, director of the Tumor Clinic at Barnes Hospital, Washington University, St. Louis, Missouri, was the speaker. He was in the state for one week holding six programs of four periods each. The attendance at these meetings was perhaps not as good



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to

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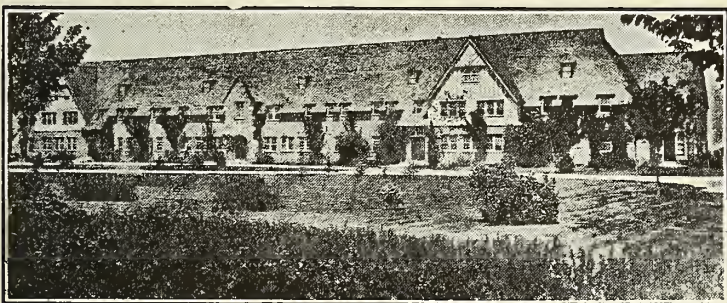
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as we had desired. This course was repeated the week of March 20, 1939, at six other towns, the program being varied considerably from the September program. This gives a total of twelve professional meetings of four periods of one hour each, making a total of forty-eight hours of post-graduate instruction by a very competent and well-trained graduate teacher. On March 23, 24 and 25, meetings were held at Hays, Manhattan and Lawrence, each the seat of a state school. At each of these three places it was arranged for Dr. Womack to address the student body of the state school. The students proved to be a very attentive audience. It is our belief that these talks to the college students were of great value.

The lay educational program has been taken over largely by the Women's Field Army. This organization was particularly active during the past year and enrolled in the April, 1938, enrollment approximately four thousand interested women. With the 1938 organization as a beginning a much more comprehensive lay educational program has been carried forward this year. Each of the twelve councilor districts have been organized with the exception of one. The total enrollment for the month of April this year is not yet known but it ought to exceed by a considerable extent the enrollment of last year.

It is the feeling of your Cancer Committee that the closest relationship should continue to exist between The Kansas Medical Society and the Women's Field Army. This Field Army is a powerful agency for good. It should be encouraged, its programs directed and its efforts praised by The Kansas Medical Society.

It is further the feeling of this committee and the recommendation of this committee that inasmuch as the lay educational program is going forward so rapidly that the chief efforts of the Cancer Committee should be directed toward professional educational work and that the refresher courses such as have been given during the past three years should be continued and perhaps expanded.

The graduate instruction that we have been able to give is made possible by the very excellent cooperation of the Kansas State Board of Health whose Secretary, Dr. F. P. Helm, has given us excellent support and is entitled to the credit for the success of these courses of graduate instruction.

Respectfully submitted,

C. C. Nesselrode, M.D., Chairman,  
Committee on Control of Cancer.

The following is the report of the Committee on Auxiliary:

#### TO: THE HOUSE OF DELEGATES

The Committee on Auxiliary is happy to report that there has been marked progress during the past year. New counties have been organized and the membership has shown an unusual interest in medical things. This has been brought about by an added interest from the medical profession in educating medical wives in the various phases of the profession.

There has been an extension of medical education to the lay public through the cooperation of the Auxiliary. They have carried to their various clubs and organizations, discussions and talks on medical problems. The medical wives have offered valuable assistance in the Control of Cancer program throughout the state.

The Auxiliary has been of great service to the profession during the past year and they are justly proud of the fine showing they have made in helping the Society in their legislative fight during the last session.

It has been gratifying to your Auxiliary Committee to

have the cooperation of the members of the Society and to note their change of attitude toward the Auxiliary. There is now a closer tie between the two organizations. This no doubt, will be of mutual benefit both to the Auxiliary and Society.

Your committee attempted five projects as outlined by the Society's Executive Committee. They were: First, the placing of a recommended list of public health books and publications in the schools and public libraries. This was handled very successfully by Dr. N. C. Morrow, of Parsons. Second: The sponsoring of public health exhibits at various public events. Dr. C. V. Black of Pratt drafted a very fine brochure for this which is to be mailed to the membership. Third: The sponsoring of a project through the medical wives where in county medical societies will present lectures on public health and medicine to state and local women's groups. This was under the supervision of Dr. L. B. Gloyne of Kansas City. Fourth: Membership campaign and program for the annual state meeting, which has been very successfully handled by Dr. Omar Raines of Topeka. Fifth: Legislative assistance.

During the next year, it would be well for the Auxiliary Committee to continue compiling a mailing list whereby some doctors' wives could be contacted in unorganized counties who would be responsible for carrying out advantageous projects for the Society. Stress should be laid on a more thorough organization of the organized areas of the state. It is felt that a closer union of the medical wives would be of great value in eliminating influences destructive to the medical profession.

It has been a joy to work with the officers of the Auxiliary during the past year. Their response and cooperation has been everything that one could expect and we want to congratulate and express our appreciation for the fine year that Mrs. Frank Coffey has just closed. It has meant much to the Auxiliary and it has also meant much to the profession.

Respectfully submitted,

C. Omer West, M.D., Chairman,  
Committee on Auxiliary.

The following is the report of the Committee on Allied Groups:

#### TO: THE HOUSE OF DELEGATES

Your Committee on Allied Groups wishes to make the following report for the past year. The committee met in Wichita on November 6, 1938, members present being: George E. Milbank, M.D.; H. E. Haskins, M.D.; George E. Paine, M.D.; A. C. Eitzen, M.D.; Mr. J. F. Austin was present as a guest of the committee, and Clarence G. Munns was present as Executive Secretary.

Dr. Milbank read the report of last year's committee presented to the House of Delegates, and discussed the program of the committee for this year.

Following a discussion of lay x-ray technicians, the following resolution was unanimously approved:

"BE IT HEREBY RESOLVED, That Roentgenology, both diagnostic and therapeutic, is a dangerous, specialized and technical branch of the practice of medicine, and that while it is recognized there is a need for lay x-ray technicians as a means of assistance to the physician, these technicians should work only under the direct supervision of a doctor of medicine.

"BE IT FURTHER RESOLVED, That it is the consensus of the committee that all x-ray therapy should be administered under the personal supervision of a doctor of medicine."

The committee instructed the central office to refer the



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above resolution to the attention of the roentgenologists of the state for their comments. It further requested that if the roentgenologists are in accord with this policy, that the resolution should then be forwarded to the Kansas State Board of Medical Examination and Registration with the request that the Board consider its adoption as a part of the rules and regulations governing the practice of medicine in Kansas.

The next item of business was a discussion of lay laboratories. It was agreed that Dr. Paine should discuss this problem with Dr. J. L. Lattimore of Topeka and Dr. C. A. Hellwig of Wichita, and that further consideration should be given to this subject at the next meeting of the committee.

A suggestion was made that the Kansas State Board of Health should confine its laboratory work to indigent or near indigent persons. The central office was instructed to determine the attitude of the Council on this question, and if the Council is in accord with this suggestion that Dr. Milbank should discuss this possibility with the Kansas State Board of Health at its next meeting.

The central office was requested to furnish Dr. Eitzen data pertaining to the practice of massage in Kansas, and the existence of masseur laws in other states.

The Kansas definition of cosmetology was discussed and tabled for further discussion at the next meeting.

The following resolution pertaining to the administration of anaesthetics, was unanimously adopted:

"WHEREAS, It is believed that the administration of anaesthetics is a dangerous, technical and highly specialized part of the practice of medicine. It is the consensus of the committee that anaesthetics should be restricted to administration by doctors of medicine wherever a fee is charged for that service."

The committee requested that this resolution should be referred to the Kansas State Board of Medical Examination and Registration for its consideration as to whether this policy should be adopted as a part of the rules and regulations governing the practice of medicine in Kansas.

Pursuant to the desire of the committee, the chairman met with the roentgenologists of Kansas at Wichita on January 15, 1939, and after a discussion of the committee's resolutions, they were changed to read as follows:

"BE IT HEREBY RESOLVED, That roentgenology, both diagnostic and therapeutic is a specialized and technical branch of the practice of medicine, which in unskilled hands might be dangerous, and while it is recognized there is a need for lay x-ray technicians as a means of assistance to the physician, these technicians should work only under the direct supervision of a doctor of medicine.

"BE IT FURTHER RESOLVED, That it is the consensus of the committee that all x-ray therapy should be administered under the personal supervision of a doctor of medicine."

These resolutions were then forwarded to the Kansas Board of Medical Registration and Examination, with the request that the Board adopt it as a part of its rules and regulations governing the practice of medicine in Kansas. Under date of April 7, the chairman of the committee received a letter from the Secretary of the Board enclosing an opinion from their attorney. He states as follows:

"It is my opinion, based upon a careful study of the statutes and the Supreme Court opinions that roentgenology, either diagnostic or therapeutic constitutes a practice of medicine and surgery as defined by the statutes of Kansas. Such practice when carried on by one not licensed to practice medicine and surgery is prohibited and unlawful.

"No rule of your Board can change these provisions of the statutes. Your Board could not, by rule, permit one not

licensed as an M.D. to practice either branch of roentgenology, even if such practice was carried on under the direction of an M.D. The Board can not, by rule, modify a statutory enactment. There may be, and undoubtedly are, certain technical operations connected with the practice of roentgenology that can be carried on by an unlicensed technician. Those operations, of course, could not include diagnostic or therapeutic work."

The members of the Council were contacted by letter for their opinions as to whether the Kansas State Board of Health should confine their laboratory service to indigent or near indigent persons. A few replies were received, most of which indicated that this work should be confined to indigent or near indigent persons. No further action has been taken in regard to this matter.

It is hoped that another meeting may be held previous to the State Meeting, at which time a further discussion of lay laboratories, cosmetology, administration of anaesthetics, and some additional new business may be taken up. The committee feels that it has made some progress in defining the practice of medicine and in determining the proper status of groups allied to the practice of medicine.

Respectfully submitted,

George E. Milbank, M.D., Chairman,  
Committee on Allied Groups.

The following is the report of the Committee on Public Health and Education:

#### TO: THE HOUSE OF DELEGATES

The Committee on Public Health and Education of The Kansas Medical Society met at Hotel Muehlebach on Tuesday, October 25, at 3:30 and considered the following suggestions that had been made for a program of 1938-39:

1. Study of lay educational programs in other states, and publication of a bulletin outlining a suggested program for Kansas.
2. Preparation and publication of a pamphlet suggesting "things you can do to safeguard your health."
3. Conference with the Kansas State Board of Health to discuss possibilities for publication of a joint health column.
4. Conferences with Kansas radio stations to discuss possibilities for institution of health programs.
5. Issuance of an announcement to state associations and other groups stating that the Society will furnish speakers on any medical or health topics desired.
6. Conferences with Kansas State Teachers Association to discuss improvement and extension of school public health programs.
7. Preparation of a pamphlet to be issued to physicians suggesting ways in which the physician can assist the public health of his community.
8. Study of the health officer problem.
9. Study of Kansas milk ordinances and dairy problems.

After careful consideration, the committee decided to table for the present all but suggestions 6, 8, and 9.

A sub-committee was appointed to obtain information for consideration of the committee at a later date on the question of the health officer problem. Dr. Maurice Snyder was made chairman of this committee.

A motion was made and carried to the effect that Mr. Munns arrange if possible a meeting at which the officers of the Kansas State Teachers Association and the Deans of the schools of education at the University of Kansas, Kansas State Teachers College of Emporia, Kansas State College, Hays, and Pittsburg Teachers College be invited to attend and to discuss the question of improvement and extension of school public health programs.



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It was also moved and carried to have Mr. Munns arrange at his convenience a meeting of the committee at which the members of the staff from Manhattan who were interested and Dr. Treece and Mr. Bauman of Lawrence be invited to discuss the question of the Kansas milk ordinance and dairy problems.

During this year as chairman of the Committee on Public Health and Education, I have obtained from the Mac-Millan Company a set of books covering the grade courses on Personal Hygiene that is available for school instructional purposes. I have made some inquiry and find that apparently such a course of instruction is only in use at Kansas State College at Emporia.

The officers of the Kansas State Teachers Association were contacted by Mr. Munns and they expressed great interest in the development of a program; likewise Dean Schwegler of the University is very much interested in attempting to develop a better program than now exists.

Mr. Perry of the Lawrence Public Schools is making a study of the question of health education in Kansas and has advised me that he will gladly submit his findings to the committee as soon as he has compiled them.

Mr. Munns has, for reasons which I think are obvious, been unable to arrange for a meeting of the committee at which officers of the Kansas State Teachers Association and deans of the various schools could be present. Likewise the suggested meeting to discuss the Kansas Milk Ordinance has not yet been consummated.

Respectfully submitted,

N. P. Sherwood, M.D., Chairman, Committee on Public Health and Education.

The following is the report of the Defense Board:

TO: THE HOUSE OF DELEGATES

Your Defense Board has had several cases of considerable interest in the past year. Some of them have been defended, and some of them have not. Some are not yet consummated. To discuss them in detail would be unnecessary and consume entirely too much space. It is of interest, however, to the general membership to know that there have been relatively few cases of malpractice during the past year in the State of Kansas. A part of this is due to the manner of extending to the membership defense in malpractice procedures.

A situation has arisen which probably needs clarification. It is this: That the Defense Board has at times defended physicians in peculiar situations where insurance companies insist their contract does not demand that they defend because it may not be, *per se*: malpractice. Our constitution unquestionably states that we are to defend our members against malpractice. Sometimes the Defense Board has felt that in situations of this sort, The Kansas Medical Society should enter and defend, and it has used its best judgment in the past in regard to this matter. It will no doubt continue to do this unless action by either the Council or the delegates precludes. The Board often wonders if the Society prefers that it take a liberal interpretation of the constitution or a rather literal one.

The situation in one county in the state has been very much improved. In that locality there have been so many suits in years past that the physicians were unable to secure adequate protection from insurance carriers. By improved relationship this situation is now partially cleared up. Though the matter can be further improved, it is the belief of the Defense Board that satisfactory adjustment will eventually be consummated.

We discovered some difficulty in defense matters with reference to physicians in border counties who have prac-

tices overlapping in two states. This matter has been entirely cleared up and the border physicians notified that they will be defended only against malpractice which occurs within the borders of our state, and an action which is brought within the State of Kansas.

The present Defense Board believes that it needs to be reiterated that only active members whose dues have been paid are eligible, according to our constitution, to be defended against malpractice. No one knows at what moment he may become a defendant in one of these suits and it is therefore hoped that this will be clear to all and that members will keep their dues paid in order that no embarrassment may arise.

The present Defense Board is anxious to serve the members of The Kansas Medical Society to the best of its ability. It is anxious for suggestions and criticisms if the members feel keenly enough about its work to discuss matters with any of its members.

Respectfully submitted,

L. S. Nelson, M.D., Chairman, Defense Board.

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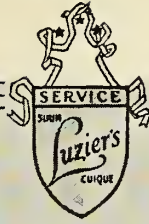
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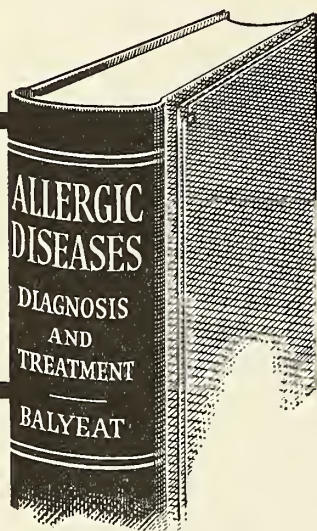
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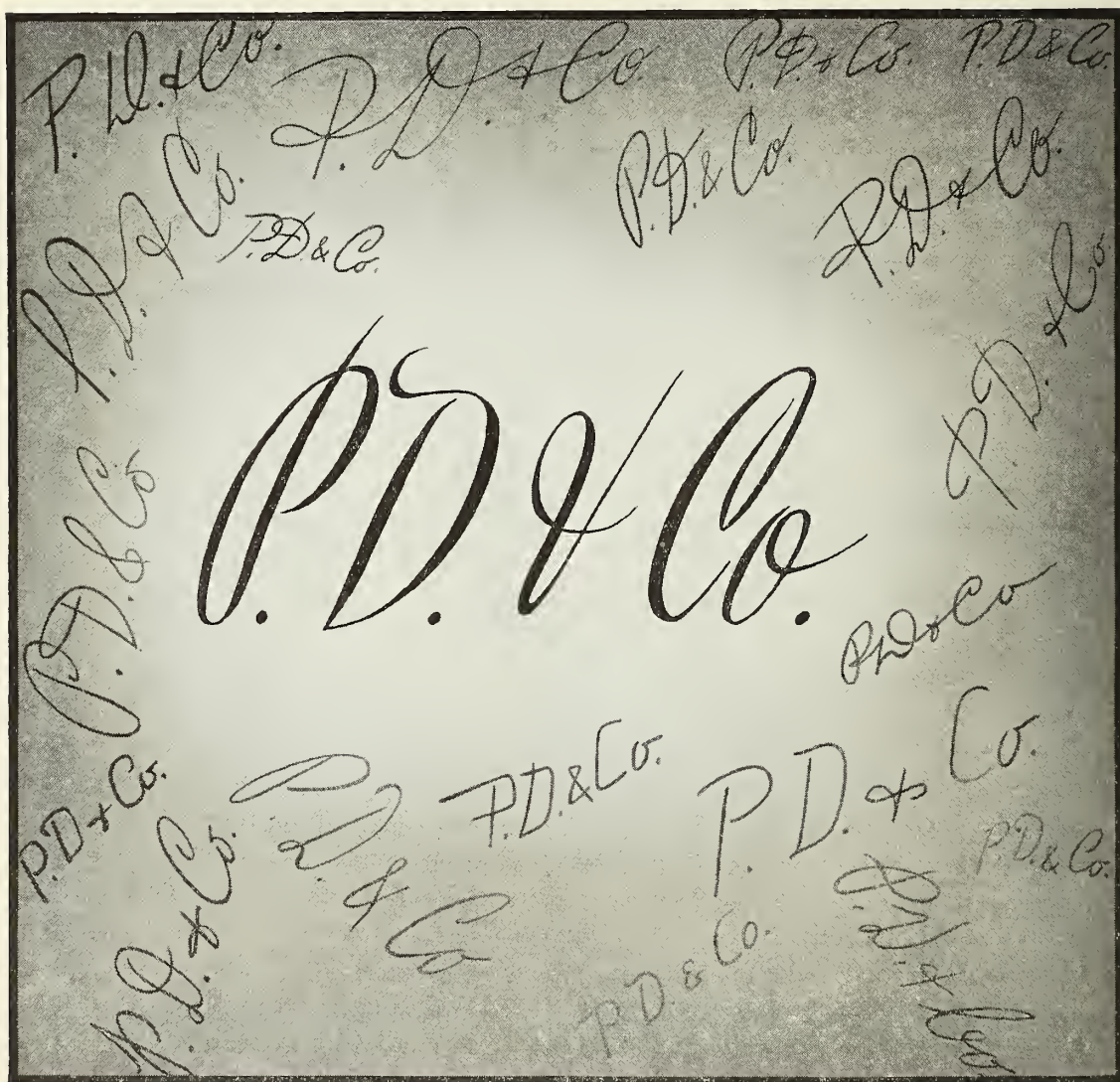
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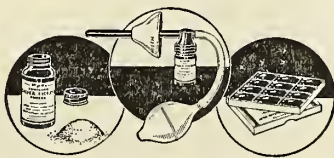
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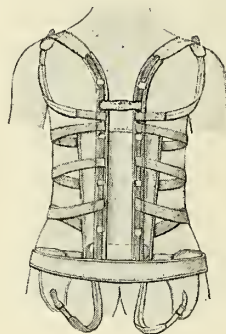
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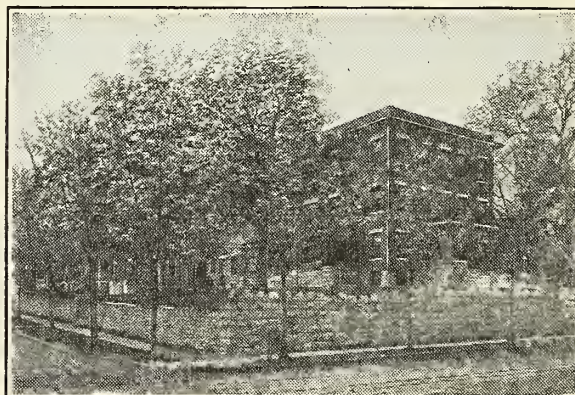
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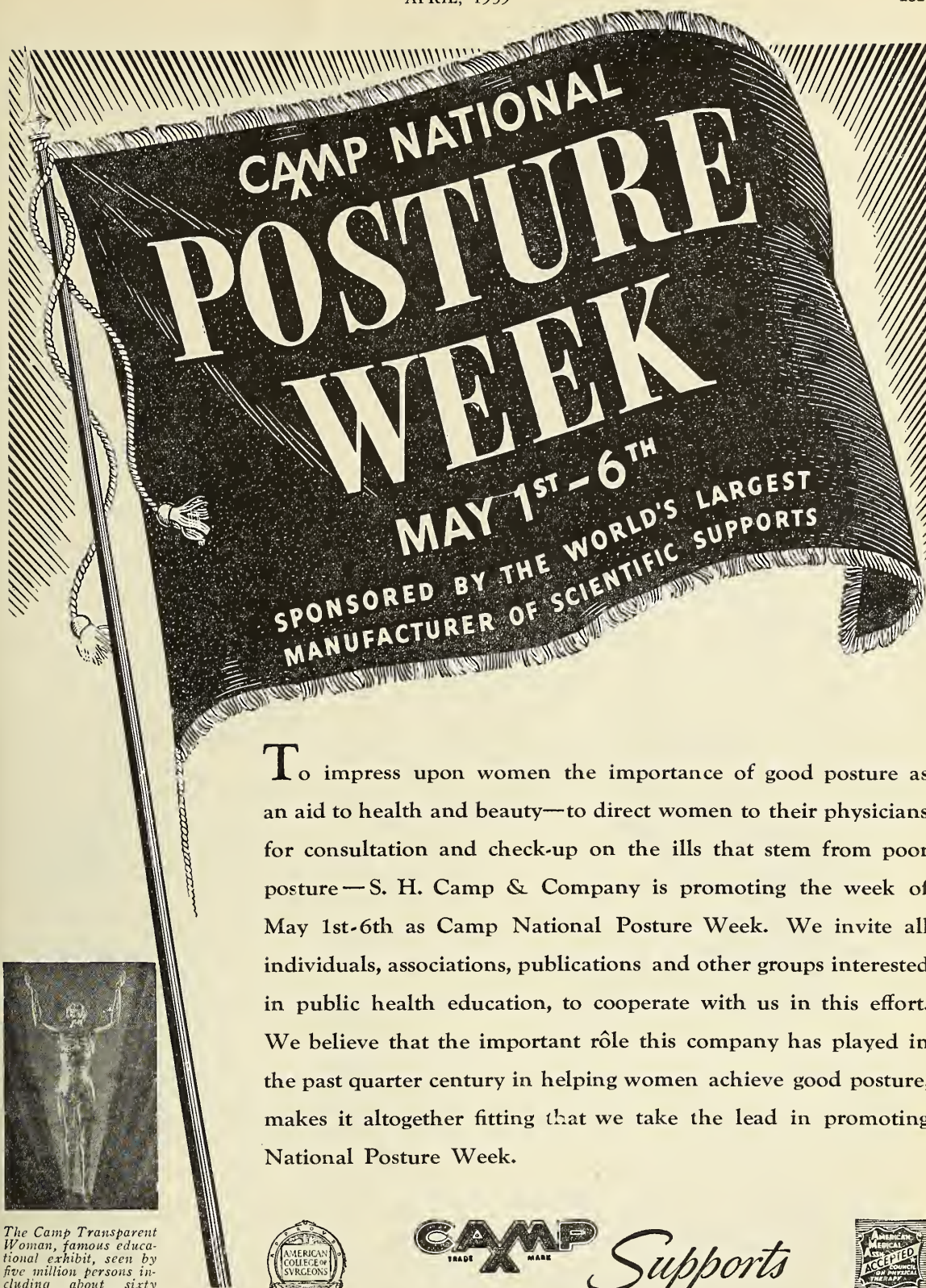
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- (1) 1937. Am. J. Digestive Diseases  
Nutr. 4, 240.  
(2)a. 1933 J. Am. Diet. Assn. 9, 295.  
b. 1934. J. Nutrition 8, 449.

- (2)c 1936. Ibid. 12, 405.  
d. 1936. J. Am. Diet. Assn. 12, 231.  
(3) 1932. J. Pediatrics 1, 749.  
(4) 1938. Am. J. Diseases Children 55, 1158.

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# The Journal Of THE KANSAS MEDICAL SOCIETY

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## SULFAPYRIDINE TREATMENT OF PNEUMONIA

Lee H. Leger, M.D., and  
Edw. H. Hashinger, M.D.\*  
Kansas City, Kansas

This paper is given as a preliminary report on the use of sulfapyridine in the treatment of pneumonia at the University of Kansas Hospitals, and because of the small number of cases treated since the first of this year, it has little, if any, statistical value. However, it corresponds favorably with the recent reports of Flippin, Lockwood, Peppers and Schwartz<sup>1</sup> of Philadelphia, who give a series of 100 cases of pneumococcic pneumonia treated with this drug alone with a mortality of four per cent; and Evans and Gaisford<sup>2</sup>, who in 200 cases of pneumonia treated alternate cases with sulfapyridine. They show an eight per cent mortality in the treated cases and a twenty-seven per cent mortality in the untreated cases.

The fifteen cases presented here consist of eight cases treated at the University of Kansas Hospitals and seven cases treated in other hospitals. For the latter group we wish to thank Dr. R. I. Canuteson (Cases III, X and XV), Dr. Wray Enders (Case XII), Dr. M. G. Berry (Case XIII), Dr. Eugene Liddy (Case XI), and Dr. Frank Hoag (Case IX) for their cooperation in supplying the clinical and laboratory data.

These cases constitute thirteen cases of pneumococcic pneumonia, one undetermined type of pneumonia and one streptococcic pneumonia. Of these fifteen cases, one death (Case VII) was unquestionably due to pneumonia. Another patient (Case XI), a chronic alcoholic, died seventeen days after the sputum had become negative for pneumococci and at the time of death had ascites. The third death occurred in a patient (Case VI) with a severe nephritis, anemia and azotemia.

The following graphic charts show the response of the temperature, pulse, respirations and white blood counts to the administration of Dagenan-Merck in the fifteen cases reported and, where

known, the type of pneumococcus is stated.

Case I. A colored male, age thirty-eight years, an old tabetic, had a chill four days previous to admission to hospital. Three days later began coughing up bloody sputum.

Physical examination revealed evidence of consolidation in upper half of right lung.

X-ray diagnosis: Lobar pneumonia of upper and middle lobes of right lung.

Although the patient's dyspnea and Quellung reaction changed within the first seventy-two hours, he continued to have fever which was undoubtedly due to a cystitis from a tabetic cord bladder.

Case II. A white male, age seventy-nine years, a moderately severe diabetic, complained of a cold for five days. The morning of admission he had a chill followed by fever.

Physical examination revealed rales and diminished breath sounds in the left chest.

X-ray diagnosis: Bronchopneumonia of left mid-lung zone.

The patient showed a remarkable recovery with a normal temperature within twelve hours after therapy was instituted.

Case III. A white male, age twenty-one years, with a known rheumatic heart disease, complained of a sore throat and chilliness for twenty-four hours previous to admission into the student hospital at Lawrence, Kansas. These symptoms were followed by pain in the right chest and bloody sputum.

Physical examination revealed evidence of consolidation in upper right lung.

X-ray diagnosis: Upper right lobe pneumonia.

This patient had severe vomiting which was well controlled by sodium bromide per rectum.

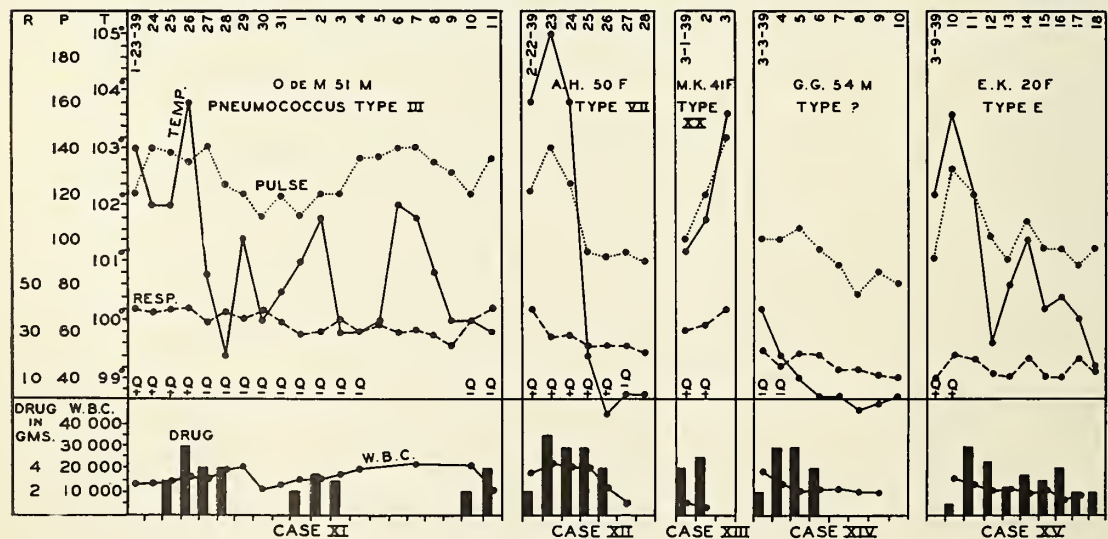
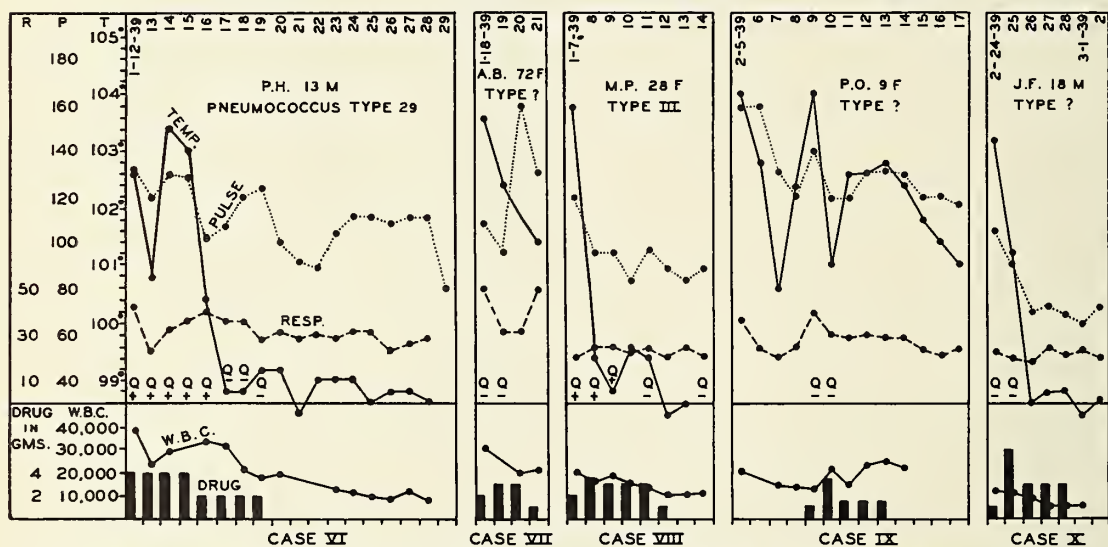
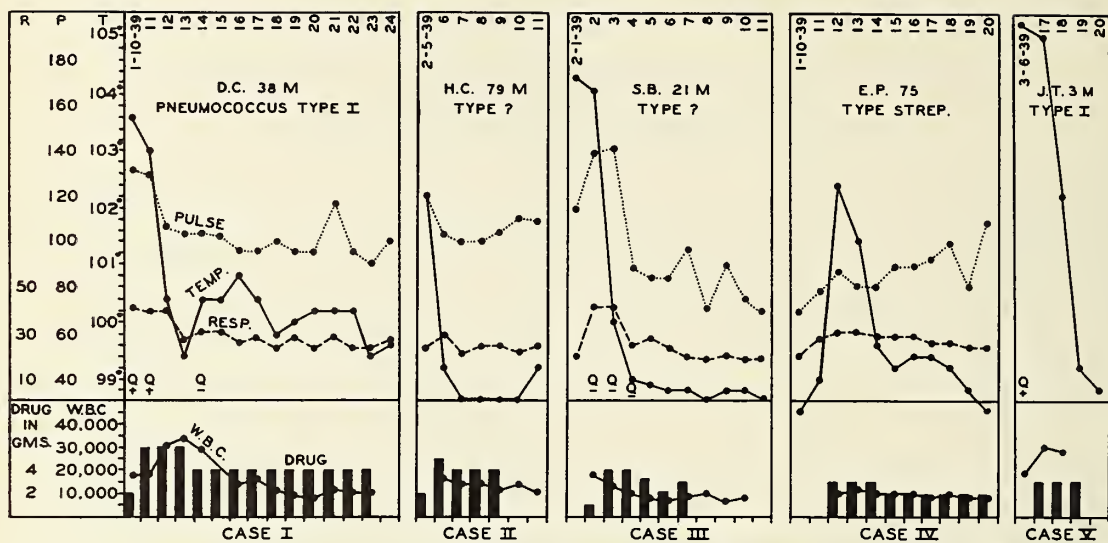
Case IV. A white female, age seventy-five years, had been suffering for one month with a mild bronchitis. She developed pain in the right lower chest followed by fever and definite signs of consolidation of the right lower lobe.

X-ray diagnosis: Lobar pneumonia right lower lobe.

This patient made a very remarkable recovery in spite of her age and general physical condition.

Case V. A white male, age three years, a week before admission to the hospital became suddenly ill with a high fever, cough and vomiting.

\* From the Department of Internal Medicine at the University of Kansas School of Medicine, Kansas City, Kansas.





Physical examination revealed an irritable, dyspneic, critically ill child with signs of consolidation over the upper two-thirds of the right chest.

X-ray diagnosis: Pneumonia upper right lung with some atelectasis of upper lobe.

This patient was admitted on the seventh day of his illness and twenty-six hours after sulfapyridine therapy was begun the temperature became normal and the child is apparently well now. It is difficult to determine the value of therapy in this case. Was the drop in temperature due to therapy or to a true crisis?

Case VI. A white male, age thirteen years, two weeks before admission had a questionable diagnosis of scarlet fever. Five days before admission had a chill followed by high fever and bloody sputum.

Physical examination revealed the findings of consolidation in upper half of the right chest. The patient also showed an acute nephritis as evidenced by blood, pus and albumin in the urine.

X-ray diagnosis: Lobar pneumonia upper right lobe and pneumonia of the left mid-lung field.

On dismissal this patient continued to have microscopic blood in the urine.

Case VII. A white female, age 72, gave a history of a cold three weeks previous to admission. Ten days later she had a chill and complained of pain in the right chest. Four days before admission she developed cough, expectoration, cyanosis and edema of the legs and feet. Patient was moribund on admission.

Physical examination revealed consolidation of entire right lung and base of left lung.

X-ray diagnosis: Pneumonia of right lung and left base.

This patient was given oxygen and stimulants. However, she became more cyanotic and, although the temperature was reduced, she died of circulatory collapse.

Case VIII. A white female, age twenty-eight years, three days before admission had a chill followed by fever and two days later developed pain in the right chest and bloody sputum.

Physical examination revealed evidence of consolidation in the right base.

X-ray diagnosis: Pneumonia of right lower lobe.

This patient showed a rapid response with a temperature drop from 103.8 degrees to 99.6 degrees within twelve hours.

Case IX. A white female, age nine years, became ill, four days before she developed pneumonia, with irritability and delirium, which progressed rapidly to unconsciousness. In this condition she was admitted to the Trinity Lutheran Hospital, Kansas City, Missouri.

Physical examination revealed marked opisthotonos, positive Kernig, bilateral ankle clonus, and injection of the throat. Spinal puncture revealed 5,400 cell count with eighty-nine per cent polymorphonuclear leukocytes and gram negative intracellular diplococci. She was given 60,000 U. of antimeningococci serum, 80 cc. of neo-prontosil intramuscularly and 120 gr. of neo-prontosil by mouth; but on the third hospital day developed increasing temperature and physical signs of consolidation in the right lower lobe.

Her general physical appearance was greatly improved after the first twenty-four hours of sulfapyridine therapy and, except for a moderately severe serum sickness which developed on the seventh day of her illness, she made a rapid recovery. She was dismissed from the hospital apparently well except for deafness in both ears.

Case X. A white male, age eighteen years, two days previous to admission to the student hospital at Lawrence, Kansas, complained of fever, nausea and vomiting, and twenty-five hours later had a chill followed by sore throat, pain in the left chest and cough.

Physical examination revealed evidence of consolidation in the left upper chest.

X-ray diagnosis: Lobar pneumonia upper left lobe.

This patient showed a prompt response and was out of bed five days after therapy was started.

Case XI. A white male, age fifty-one years, twenty-four hours previous to admission to St. Margaret's Hospital, complained of pain in the left chest, dyspnea, vomiting, violent coughing and expectoration of blood streaked sputum.

Physical examination revealed evidence of consolidation over left lower chest with rales in both bases.

Sulfapyridine was given for three days with a drop in temperature to 99.4 degrees. However, because of the patient's nausea and irrational state of mind it was discontinued. Following this, the temperature again rose, and he was again given sulfapyridine with reduction of fever. No pneumococci were present in the sputum after the first four days in the hospital. This patient developed ascites with numerous rales throughout both lungs, and 1,300 cc. of ascitic fluid was removed the day before death. However, he became progressively worse and expired a cardiac death. He was an old chronic alcoholic.

Case XII. A white female, age fifty years, three days before admission into the Lawrence Memorial Hospital, had a chill followed by chest pain and blood tinged sputum.

Physical examination on admission revealed a critically ill patient showing cyanosis and signs of

consolidation of the middle and lower lobes of the right lung.

This patient remained in the hospital for two days and was then dismissed to convalesce at home. Three days later she had a recurrence of fever (103 degrees) and some chest pain. These subsided with the use of aspirin and phenacetin, and her condition continued to improve. At present she is apparently recovered completely.

Case XIII. A white female, age forty-one years, for six years had been known to have hypertension, albuminuria and severe anemia due to chronic nephritis. Thirteen days before admission into St. Luke's Hospital she contracted "influenza" and ten days later, three days prior to admission, she developed cough, dyspnea and fever. On admission she was in a semi-comatose condition. Blood study revealed a hemoglobin of 36 per cent, red cell count of 1,700,000, white cell count of 4,600 with ninety per cent polymorphonuclear leukocytes, non-protein nitrogen of 150 mgm. per 100 cc., creatinine 4.5 mgm. per 100 cc. and the urine contained two plus albumin.

Physical examination revealed signs of consolidation of the lower lobe of each lung.

She was given two blood transfusions, stimulants, and intravenous fluids during hospitalization, but her condition became progressively worse and terminated in profound coma and high fever about 50 hours after admission to the hospital.

Necropsy diagnosis: (1) Bilateral lower lobe pneumonia. (Type XX Pneumococci). (2) Chronic glomerulonephritis (advanced).

Because of the severity of the nephritis, secondary anemia and azotemia, we doubt if this case should be included as a death due to pneumonia.

Case XIV. A white male, age fifty-four years, became ill ten days before admission into the hospital with a chill, fever and cough with expectoration. Four days before admission he developed pain in the right chest. Past history revealed the patient had been a metal worker for twenty-two years and had had a cough for five or six years.

Physical examination revealed evidence of consolidation in the right lower chest.

X-ray diagnosis: (1) Bilateral lung fibrosis. (2) Bronchopneumonia in base of right lung.

This patient responded nicely to therapy. However, he has continued to have some cough with expectoration, which has caused us to suspect strongly bronchiectasis.

Case XV. A white female, age twenty years, had complained of a cold with generalized aching for ten days prior to admission into the student hospital at Lawrence, Kansas. The onset of pneumonia oc-

curred twenty-four hours before admission with a chill, followed by cough and pain in the right chest.

Physical examination revealed signs of consolidation in the right upper chest.

X-ray diagnosis: Pneumonia involving the upper lobe of right lung.

This patient had an initial drop in temperature about forty-eight hours after sulfapyridine therapy was begun. However, because of an insufficient supply of the drug, the dosage was decreased; and the temperature again rose. Again, the patient responded to the drug and has continued to improve.

The dosage given in these cases varied greatly and was largely governed by the toxic symptoms evoked. However, the recent report by Flippin et al advises an initial dose of grams II followed by gram I every four hours until a dose of twenty-five grams has been given.

The toxic symptoms in these cases consisted of nausea and vomiting. No cyanosis, dermatitis, drug fever or unusual blood changes were noted. Nausea occurred in fourteen cases and vomiting in ten cases. This is somewhat higher than the incidence quoted by Flippin et al in which fifty-six per cent of their cases were nauseated and forty per cent vomited. The red cell count and hemoglobin were increased in two cases; eleven cases showed no change; and two patients, one a nephritic (Case VI) and the other a chronic alcoholic with cardiac failure and ascites (Case XI), showed a decrease.

Another interesting feature noted in this group of cases was the coincidence of the negative Quellung reaction with the drop in temperature and general clinical improvement. This, it seems, may be of some prognostic value and certainly substantiates the contention of Whitby<sup>3</sup> that the chemotherapy of pneumonia depends upon the degenerative effect on the capsule of the pneumococci. The Quellung reaction was first described by Neufeld<sup>6</sup> in 1902 as a "quellung" (swelling) of the peripheral zone of the pneumococci when mixed with specific immune serum. The Neufeld method has been modified by Sabin<sup>7</sup> and is now easily performed by mixing sputum, undiluted rabbit serum (specific immune types) and alkaline methylene blue and examining under the oil-immersion lens. If type specifically is present, a definite capsule, which takes no stain and has a ground-glass appearance, will be present about the pneumococci: If absent, no "halo" is noted about the organisms.

The rapidity with which sulfapyridine is absorbed is debatable or at least variable, as shown by the original work of Whitby<sup>4</sup> who found it rapidly absorbed; and the recent report of Long<sup>5</sup> who found absorption from the gastro-intestinal tract variable



and reports a solubility in water of only .1 per cent. Blood concentrations of sulfapyridine were not determined in our cases, but it is interesting in this connection that the Philadelphia group, Flippin et al, report a wide variation in the blood levels and doubt the importance of high concentrations. In support of this is the fact that nine of their twelve patients with low blood concentrations (1 to 2.8 mg. per 100 cc.) showed a drop of temperature in the first twenty-four hours, while only six of eleven cases with high blood concentrations (10 to 18 mg. per 100 cc.) showed this prompt response.

In conclusion, although the use of sulfapyridine in the treatment of pneumonia is, as yet, in the experimental stage, we feel that its record is remarkable and that it is deserving of a very thorough trial.

### BIBLIOGRAPHY

1. Flippin, H. F., Lockwood, J. S., Peppers, D. S., and Schwartz, Leon: The Treatment of Pneumococcal Pneumonia with Sulfapyridine. *Journal of American Medical Association* 112:529. February 11, 1938.
2. Evans, G. M., Gaisford, W. E.: Treatment of Pneumonia with 2-(P Aminobenzenesulfonamido) Pyridine. *Journal Lancet* 2:14. July 2, 1938.
3. Whitby, Lionel: Chemotherapy of Bacterial Infections. *Journal Lancet* 2:1095. November 12, 1938.
4. Whitby, Lionel: Chemotherapy of Pneumonia and Other Infections with 2-(P Aminobenzenesulfonamido) Pyridine. *Journal Lancet* 1:1210. May 28, 1938.
5. Long, Perrin H.: Sulfapyridine. *Journal of American Medical Association*. 112:538. February 11, 1938.
6. Neufeld, F.: Quoted by Sabin (7).
7. Sabin, Albert B.: Immediate Pneumococcus Typing Directly from Sputum by the Neufeld Reaction. *Journal of American Medical Association* 100 (20):1584. May 20, 1933.

## A VENOUS PRESSURE APPARATUS WITH ITS CLINICAL APPLICATIONS\*

Frederick R. Johnson, M.D.

Topeka, Kansas

The apparatus we have been using for the past seven months to measure venous pressure and venous hypertension is a modified Mortiz and von Tabora apparatus similar in many respects to those which have been in use for the past seven years in Presbyterian Hospital, New York City.

We wish to review briefly the various techniques of estimating the pressure of blood on the nervous side of the circulation and then discuss the practical applications of attempting an accurate procedure in certain disease states.

Stephen Hales, minister to the parish of Teddington in England, took the first venous pressure measurement on record when he inserted a cannula into the left jugular of a mare, connected the cannula to a four-foot glass tube similar to the longer one he had

used to determine arterial pressure, and observed the height to which the blood rose in the tube.<sup>1</sup>

During the long era of venesection and blood-letting for all the ills to which man is heir, little inquiry was made into the pressure of blood in the veins and into the effects on the circulation of the removal of large quantities of blood, although engorgement of the neck veins was noted in cases of marked cardiac failure. In 1899, Gaertner<sup>2</sup> observed

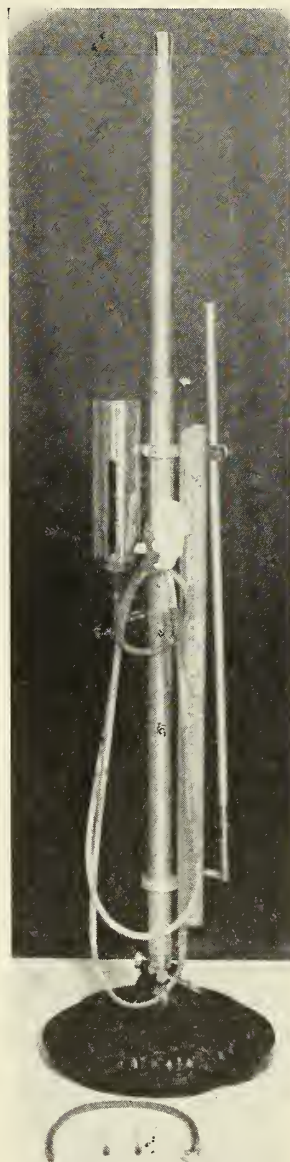


Fig. 1. The venous pressure apparatus in position for carrying. Weight, 8 lbs. The glass reservoir with cork-lined metal case and friction cap is on the left. The manometer-tube protected by the metric rule and the hinged bar containing a spirit level are on the right. Pinch-cocks beneath the reservoir and manometer close off the rubber tubing which connect the two through a glass Y-tube. The gauze sponge prevents contamination of the free end of the Y-tube which provides connection for the 12-inch piece of rubber tubing shown at the base. This piece of tubing with the 3-way stop-cock and No. 18 and No. 19 needles are carried separately wrapped in a sterile towel.

\* Read before the Shawnee County Medical Society March 6, 1939, in Topeka.

that he could use a vein as a manometer. A distended vein, for example, on the back of the hand, normally collapses when it is raised to the level of the base of the heart at the angle of Louis. If congestive heart failure is present the hand must be raised several centimeters above the angle of Louis. Gaertner would measure this distance, and he was able, roughly, to correlate his figures with the degree of heart failure present.

In 1910 Moritz and von Tabora<sup>3</sup> devised a simple manometric system filled with physiological saline and connected this with a needle inserted into a vein of a patient, usually in the arm. A free fluid system was established between the manometer and the patient's heart through glass and rubber tubing, needle, and vein. The venous half of this system was filled with blood, the external half with physiological saline, but the specific gravities of the two fluids could be considered equal for all practical purposes. Thus when the meniscus in the manometer came to rest, the height of the column of saline above the base of the heart was equivalent to the back pressure of blood in the great veins at the right atrium. How to measure the height of the column when the base of the heart was the zero point? The angle of Louis at the junction of manubrium and sternum lies five centimeters above the superior vena cava when a patient is lying down. A variation of a few millimeters in individual patients is of no practical account. Therefore, if the five centimeter mark on the manometric scale was held on a level with the angle of Louis, zero lay on a level with the base of the heart, and the height of the column of saline could be measured directly.

Various modifications of the Moritz and von Tabora manometer have been attempted and have been accorded degrees of popularity. Griffith, Chamberlain, and Kitchell<sup>4</sup> devised one in which a reservoir of saline was attached by rubber tubing above the manometer like a funnel, the manometer connected directly with the needle, and the arm placed so that the ante-cubital vein was on a level with the mid-axillary line. After all air had been expelled from the tubing and needle, and the venupuncture completed, the reservoir was detached. The fluid in the tube fell, and when it came to rest the distance between the meniscus and the arm was measured and read directly as the venous pressure. Cohen<sup>5</sup> devised a similar modification in which the reservoir was a syringe attached to the needle by a 3-way stopcock, and this has been placed on the market commercially by Becton-Dickinson and Company. Leaman<sup>6</sup> advocates a method similar to that of Stephen Hales in which an empty vertical tube is connected to a needle in a vein and the height to which the blood

rises is measured as the venous pressure. A rather ingenious modification has been perfected by Brams and Golden, but time does not permit of discussing all the methods which have been devised in the past ten years for carrying out this procedure. Each method has its individual merits and faults. Certainly the great disadvantage which is common to them all is the necessity of venupuncture. In attempts to obviate this, which is a strong deterrent to repeated venous pressure recordings on the same patient, a number of apparatus have been tried which measure, by means of water, alcohol, or air-gauge manometers, the amount of force necessary to collapse a distended vein. Thus far, at any rate, these methods have been doomed to failure because difficulties in being certain of compression and end-point readings, variations in the elasticity and compressibility of vein-walls, obesity and lack of visible superficial veins, and differences in the height of the column of blood distending the vein selected.

Our apparatus is modified from the original Moritz and von Tabora instrument in only two essential characteristics. The length of the stand has been increased. This obviates the necessity of a bed-side table the same height as the bed to place the manometer at the proper level, allowing us to use the instrument at any bedside without disarranging the furniture in the room. The increase in weight of the base permits transportation without danger of its toppling over or spilling saline from the reservoir. Secondly, the reservoir has been enclosed in a metal case lined with rubber and cork and stoppered with a tight friction-cap to prevent contamination of the sterile saline or breakage of the container. The glass container holds a sterile gauze sponge in the narrow neck pressed in place by the metal cap. In addition, the glass manometer-tube has been placed against the manometric rule to guard against breakage.

Briefly, to use this apparatus, one connects it with a needle by means of a 12-inch piece of rubber tubing and a 3-way stopcock. This connection is made through a glass Y-tube which, in transit, is kept covered with a sterile gauze sponge. The manometer is raised on the standard until the 5-centimeter mark is on a level with the angle of Louis, the patient lying flat or in partial flexion. A hinged bar containing a spirit level aids in this manipulation. The reservoir and manometer are connected by rubber tubing through the glass Y-tube, but either one can be closed off by pinch-cocks. Air is expelled from the system by saline from the reservoir, which is then closed off. The vein is entered with the manometer open and the 3-way stopcock at the needle turned so that blood flows out on to the arm of the



patient or into a syringe. When the needle is well in the vein, the tourniquet is removed and the 3-way stopcock turned so that saline enters the vein from the manometer. The meniscus in the manometer falls rapidly at first, then more slowly, halting with each cardiac systole, slowing during expiration, faster during inspiration. When a level is reached the meniscus oscillates slightly. If the patient is not dyspneic, he is asked to take a deep breath. The men-



Fig. 2. The venous pressure apparatus in use at the bedside. The height of the manometer has been adjusted by laying one end of the hinged bar on the right containing a spirit level on the angle of Louis. When the bar is level, zero on the manometer is 5 cm. below the angle of Louis. The pinch-cock on the tubing below the manometer is open; that beneath the reservoir, closed. Successive readings are taken by momentarily opening the pinch-cock below the reservoir and allowing the physiological saline in the manometer to again seek its lowest level.

iscus will fall during inspiration to a lower level and then rise again as the breath is held and intrathoracic pressure increases. With relaxation the meniscus seeks its previous level. The lowest consistent reading is taken directly as the venous pressure in millimeters of water. A brief opening of the pinch-cock below the reservoir shoots the manometer up, and second and third readings are taken. The final result is the average of the three, and these should not vary more than five millimeters.

The whole procedure takes no more than three minutes, five at the most, unless the patient exhibits emotional tension. Increased muscular tonus of the voluntary muscles in the arm may cause a false elevation of the venous pressure. It is frequently observed that the first reading is ten to twenty millimeters of water higher than the subsequent two. This may necessitate obtaining four or five successive readings. The types of apparatus which do not permit more than one reading through one venopuncture may not reveal this factor of increased muscular tonus. The effects of emotional tension on venous pressure have not been accorded much attention. There are indications that emotional trauma may, temporarily at least, cause an elevation of as much as forty to fifty millimeters in those who are suffering from organic heart disease.

One can take blood specimens for the laboratory, give intravenous medication, or give a venoclysis through the 3-way stopcock on the needle, leaving the venous pressure apparatus at the bedside. In this way the venous circulation can be checked every half hour or so, if necessary, when intravenous infusions are required. This is of particular value in post-operative treatment after intestinal surgery. Here large amounts of parenteral fluids are often required to correct electrolyte imbalance, and there is frequent danger of overburdening the heart.

Venous pressures in healthy individuals, the "normal readings," all fall well below 100 millimeters of water, usually between fifty and seventy millimeters. Readings above 100 millimeters are found primarily in heart failure when the right side of the heart has been involved. With incipient or mild failure the venous pressure will lie between 110 and 150 millimeters of water. In extreme cases it rises as high as 250 to 300. Some of the highest readings, above 300, are found in cases of constrictive pericarditis, where, often, no congestive heart failure is present. Cases of mediastinal obstruction likewise may give high results, varying in the two arms and lower in the thighs. On the other hand, in emphysema the venous pressure is abnormally low, occasionally down to minus thirty or minus forty, but after the onset of right heart failure, the venous pressure here, too, begins to rise. In paroxysmal left-sided heart failure as seen in so-called "cardiac asthma" in patients with aortic valve lesions and in those with hypertension and decompensation, the peripheral venous pressure is normal despite the pulmonary congestion as long as the right ventricle functions adequately.

After the apparatus has been used, both reservoir and manometer are closed off. The short piece of rubber tubing is disconnected from the glass Y-tube,

the latter wiped off with alcohol, and the protecting sterile sponge replaced. Only the short piece of rubber tubing, 3-way stopcock, and needle need be sterilized between patients. The containers and tubing of the main apparatus can be taken apart, washed, and auto-claved once every four to six weeks at the hospital. Thus, fifteen minutes after a venous pressure recording on one patient, the instrument is ready to use again. One can carry the 3-way stopcock, short piece of tubing, and needle wrapped in a sterile towel in one's bag.

\* \* \* \*

What practical value to the general practitioner has an apparatus which will determine quickly and accurately the state of the peripheral venous circulation? A paragraph from Eyster,<sup>8</sup> written ten years ago, on the clinical aspects of venous pressure says, "By far the greater part of the clinical situation in cardiac failure is due directly to venous engorgement exhibited as passive congestion in various organs and as exudates from serous membranes. As such engorgement occurs, the venous pressure rises, to fall again as the engorgement is reduced or disappears. Venous pressure may, therefore, be said to represent not only the primary factor that underlies the symptoms and functional pathology of cardiac failure, but to be responsible, also, in large part, for the physical signs accompanying it, such as edema, congestion, cardiac dilatation, orthopnea, cyanosis, and reduced urinary excretion. As the principal underlying factor in these conditions and as the main index of cardiac behavior, it is the most reliable and important single factor to determine and to follow accurately when this clinical condition develops or when it is impending."

The value of accuracy here is difficult to over-emphasize even for single readings. Congestion of the cervical and other peripheral veins is often misleading, complicated by emaciation, obesity, or local obstruction, and often may not be apparent. One is often surprised by the difference between the actual reading and the clinical estimate. A single reading below 100 millimeters precludes the possibility of failure of the right ventricle when the patient is resting, and a single elevated reading yields an accurate indication of the precise degree of failure present. A recording of over 200 may reveal the need for prompt venescction.

In the presence of congestive failure venous pressure readings can be made of great prognostic value by repetition. Then the rapidity with which the venous pressure returns to normal—or continues elevated despite therapy—foreshadows the course of events. The repeated

venopunctures necessary need not be disturbing if a drop of novocaine is used.

Single venous pressure determinations may be of great aid in differential diagnosis. Edema may be due to venostasis from cardiac failure, to increased capillary permeability as in acute glomerulonephritis, to reduced serum protein as in nephrosis and certain states of hepatic insufficiency or poor nutrition, to portal obstruction as in hepatic cirrhosis, or to local venous or lymphatic obstruction. A single venous pressure reading may throw much light on this problem of edema as it may in pleural effusions and ascites. The differentiation of "cardiac" from "bronchial" asthma occasionally presents difficulties. In emphysema, Pick's syndrome of polyserositis, pericarditis with effusion or constriction, and mediastinal x-ray masses can all be clarified to some extent by accurate venous pressure determinations. The proper time to tap a pericardial effusion can be told by means of frequent venous pressure readings better than by any other method.

The detection of cardiac failure when the classical signs are masked by the presence of other primary disease states is often difficult. This is particularly true of lobar pneumonia. When should a patient with pneumonia be digitalized? A venous pressure recording above 100 millimeters, I believe, calls for digitalis unless mediastinal obstruction or pericarditis can be definitely proven. Repeated readings can prove or disprove the efficacy of therapy and give valuable prognostic aid.

Dr. John L. Caughey, Jr.,<sup>12</sup> disagrees with the use of an elevated venous pressure as an absolute indication for digitalis in a patient with pneumonia. He says, "I have become convinced that 'shock' in its early stages (cold, clammy skin, cyanosis, tachycardia, and thin pulse, even with the arterial blood pressure fairly well maintained) may be accompanied by a high venous pressure quite without relation to cardiac failure. In these cases, the need is for fluids intravenously, and the idea that any finding of elevated venous pressure in such a situation means heart failure, is apt to deter one from giving the necessary treatment.

"I know you can find support in the literature for your statement, but keep the other possibility in mind. The finding of an elevated venous pressure is important, but whether it means heart failure or the peripheral circulatory disturbance of shock must be decided on the basis of the clinical picture as a whole."

The presence of cardiac failure in pregnancy and in certain surgical cases can often be shown by single venous pressure readings when other signs are con-



fused. In coronary occlusion the onset and degree of failure can be shown by this method. In many of these diseases we watch the arterial pressure closely, taking blood pressure readings at frequent intervals. Yet arterial pressure often remains quite constant while the patient drifts deeper into congestive failure and blood collects on the venous side of the circulation with a mounting venous pressure. There is no relationship between the arterial and the venous pressure, and the latter is much more labile.

In conclusion we quote briefly from the writings of clinicians of wider experience than our own. This paragraph is from Dr. Dana Atchley:<sup>9</sup>

"As clinical medicine comes nearer to the status of a genuine science, it is increasingly apparent that our simple diagnostic terms are not adequate for classifying the complex problems that present themselves. A verbal pigeon-holing may be satisfactory in those conditions which are poorly understood, but when there is any real comprehension of the mechanism of disease, a much more complete appraisal is essential. There is then an immediate demand for accurate quantitative data repeated often enough so that both the direction of the disturbance and its velocity may be appreciated."

Leaman<sup>10</sup> has said: "When early myocardial failure is suspected, venous pressure readings are no longer of academic interest but become of inestimable value to the clinician in diagnosis, prognosis, and treatment. When the cardiac mechanism as a whole is beginning to fail it is of great importance to learn this at the earliest possible time in order that prompt treatment may be given and the usual familiar picture of congestive failure avoided."

And from Brams:<sup>11</sup> "Elevation of venous pressure in a patient known to have cardiac disease but who is apparently in a good state of compensation will sometimes serve as a warning of impending failure. It may, in fact, be the earliest sign of impending cardiac defeat in a patient in whom such a state is not suspected."

To recapitulate: An apparatus is presented for the determination of venous pressure by the direct method, modified from Moritz and von Tabora, which seems to be eminently fitted for use by the general practitioner. Some other types of apparatus are described and the indirect method is touched upon.

An attempt has been made to show that accurate determinations of venous pressure have a very definite practical application in a limited field. Venous pressure determinations should be added to the armamentarium of the general practitioner.

The work of Mr. Paul Ioerger of Topeka who de-

signed and built this apparatus for me is gratefully acknowledged.

## REFERENCES

1. The Annual Register for the Year 1764, London, 1783, Vol. VII, p. 42.
2. Robertson, H. F.: The Importance of Venesection and Venous Pressure to the General Practitioner. *Pennsylvania Medical Journal* 39:319-322 February 1936.
3. Mortiz, F.; and v Tabora, D.: On a Method of Determining Exactly the Pressure in Superficial Veins of Man, *Deutsches Arch. f. klin. Med.* 98:475-505, 1910.
4. Griffith, G. C., Chamberlain, C. T., and Kitchell, J. R.: Observation on the Practical Significance of Venous Pressure in Health and Disease With Review of the Literature, *American Journal of Medical Sciences* 187:642-649 (May) 1934.
5. Cohen, L.: A New Instrument for Determination of Venous Pressure by Direct Method, *Journal of Laboratory and Clinical Medicine* 22:94-96 (October) 1936.
6. Leaman, W. G., Jr.: Venous Pressure, Its Clinical Importance with a Simplified Technic for Its Determination by Direct Method, *Penn. Medical Journal* 38:244-247 (Jan.) 1935.
7. Brams, W. A.: Venous Pressure, *Medical Clinics of North America* 19:1273-1276 January 1936.
8. Eyster, J. A. E.: Clinical Aspects of Venous Pressure, *Mac-Millan*, New York, 1929. Quoted from Robertson, op. cit.
9. Atchley, D. W.: Clinical Chemistry, *Nelson's Loose-leaf Medicine* 3:36A (November) 1938.
10. Leaman, W. G., Jr.: op. cit.
11. Brams, W. A.: op. cit.
12. Personal communication to the author.

## PENTOTHAL SODIUM IN EYE SURGERY

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The use of a general anesthetic in operations on the eye has formerly been limited to the use of ethyl chloride and ether; but, with the advancement of the art of anesthesia the use of the Magill intratracheal tube has removed the anesthetist and his equipment from the field of operation.<sup>1</sup> Further developments in the methods of administration of general anesthetics have produced a very suitable method by means of the intravenous route. Two drugs have been commonly used by this method; namely, evipal<sup>2</sup> soluble and pentothal sodium.

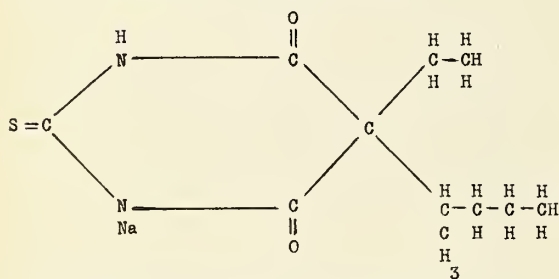
This discussion is to be limited to the use of pentothal sodium in operations on the eye and a resume of the results obtained from its administration to 227 cases on the ophthalmology service of the University of Kansas Hospitals.

The intravenous route of administration offers certain advantages over the other methods in vogue. These advantages are the use of a minimum amount of equipment, the portability of the agent and equipment, the marked rapidity of induction of anesthesia, the complete removal of the anesthetist from the operator's field, the apparent absence of nausea and vomiting (an important factor to be considered in

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eye surgery), and the shortened period of recovery.

Referring briefly to its chemical, physical and physiological properties, pentothal sodium is a lemon yellow powder having a bitter taste and a slight smell of sulphur. The drug is obtained in one grain ampules, each of which is to be dissolved in twenty cc. of distilled water, making a five per cent solution. Chemically, the drug is somewhat similar to evipal soluble and is of the quick acting type of barbiturate having the structural formula of sodium ethyl 1-methyl butyl thiobarbituric acid<sup>2</sup>.



Physiologically the drug is detoxified in the liver but there appears to be no evidence of liver damage following its use. Respiration is always considerably depressed, but, when administered by an experienced anesthetist who is able to cope with the problems arising from respiratory depression, its use is quite safe. Its action appears to be without effect upon the heart except when anoxemia has been produced. The blood itself is unchanged<sup>3</sup>.

Clinically, pentothal sodium presents the following characteristics: compared with evipal it is thirty to fifty per cent more potent; induction by means of pentothal is rapid and smooth, with the patient showing his lapse into unconsciousness with only a sigh, closing of the eyelids, or finally an occasional yawn. Sleep comes on gently and rapidly and is shortly followed by complete muscular relaxation, with slackness of the jaw giving a reliable indication of the depth of relaxation<sup>4</sup>.

A slight fall in blood pressure, which is quickly regained, appears in the early stages of anesthesia.

Cyanosis may appear if anesthesia is very deep. This is no cause for alarm, but its presence must be quickly corrected by the maintenance of a patent airway and the judicious use of oxygen and carbon dioxide, as well as stimulants such as metrazol or coramine if necessary.

The respirations are quiet and sometimes imperceptible, but if the arm is placed across the chest lightly while supporting the chin, respirations are perceivable. If the color remains good while respirations are depressed no danger need be anticipated.

Pentothal sodium approaches a safe degree of controllability even though it is a nonvolatile substance.

Since it is broken down so rapidly in the body, it approaches a controllable anesthetic agent and when given in repeated small doses it presents minute to minute controllability.

With overdosage of pentothal sodium the patient presents a deep cyanosis with imperceptible respirations. Complete cessation of respiration occurs if corrective measures are not taken. The pulse remains strong and steady, however, for a considerable period of time and becomes weak only as a result of cardiac and vaso-motor asphyxiation. The way to avoid overdosage and its undesirable features lies in the slow administration of the drug and constant watching of the patient.

The technique of administration is essentially the same as that for all intravenous administrations. The arm is carefully fastened to an arm board and then prepared by means of iodine and alcohol. A tourniquet is applied and the median basilic vein palpated, or, if not found, the most prominent vein that stands out. The patient is prepared by means of sterile drapes and the solution is then ready to be given. The freshly prepared solution of five per cent pentothal sodium is slowly injected so that one or two cc. are injected in the space of sixty seconds. The patient at this time begins to appear drowsy and, if questioned, replies that he feels drowsy and sleepy. A pause of thirty seconds is allowed for the complete effects of the drug to take place; then another one to three cc. is given as necessary, at the end of which time the patient is asleep. The anesthetist at this time pinches the lower and upper eyelids gently with a pair of forceps to determine if the reflex is still present. If present, further administration of the drug is given slowly; normally one to three cc. more, followed by a pause for anesthesia to become complete. By this time, from seven to ten cc. have been given over a period of three to five minutes. Absence of the lid reflex indicates that the patient is completely relaxed and ready for surgery. The needle is left in the vein and the patient carefully watched throughout the operation. The pulse, blood pressure, and respiration are recorded every three to five minutes. If further anesthesia is necessary, a half to one cc. is given, when complete relaxation again will be obtained. The necessity for further administration of the drug is usually determined by the swallowing reflex. By this method a fractional dose may be given, securing perfect control over the anesthesia as with the administration of the older anesthetics by the inhalation method. Also, in an emergency, sudden administration of stimulant drugs can reach the circulation instantly. By this method a smooth and even anesthesia can be maintained.

Premedication in one form or other was given to



all patients, depending upon the individual characteristics of the patients themselves. Morphine sulphate, grain one-eighth or grains one-fourth was given one hour before operation to twenty cases. Morphine sulphate gr. one-sixth with scopolamine hydrobromide gr 1/200 was given to fifteen cases. Morphine sulphate grains one-sixth with atropine sulphate gr. 1/150 was given in 185 cases. Codeine sulphate grains one-half was given to seven patients, namely children ten years of age.

A tabulation of the results we obtained will illustrate its usefulness in surgery of the eye. This series comprises 227 patients of which 106 were males and 121 females. All of our patients were ten years of age or older. The oldest was a man seventy-eight years of age. An analysis of the age grouping is seen in Table 1.

TABLE 1.

Ages	No. of patients
10-19	61
20-29	48
30-39	36
40-49	22
50-59	23
60-69	23
70-79	14

Pentothal sodium was used in the greater percentage of cases in the first three decades of life. It is very efficient in children when local anesthesia is frequently unsatisfactory.

Pentothal sodium was used in a diversified number of operations, as will be noted from Table 2 where we have classified the different types of operations. There were 233 operations performed on 227 patients.

TABLE 2

Type of operation	No. of operations
1. Detached retina	28
2. Muscle operations	94
3. Enucleations	31
4. Eviscerations	9
5. Plastic to eye	19
a. Fat transplant	1
b. Eye lid operation	7
c. Eye socket	2
d. Tear ducts	8
e. Replacement of iris	1
6. Thermophore treatment (corneal ulcers)	4
7. Orbital tumors	4
a. Biopsy	2
b. Excision	2
8. Discission	7
9. Removal of foreign body	3
10. Cataract extraction	5

11. Glaucoma operation	5
12. Sclerectomy	8
13. Iridotomy	8
14. Miscellaneous	8
a. Freeing adhesions with injection of adrenalin	1
b. Drainage of retrobulbar abscess	1
c. Pterygium	1
d. Modified Kronlein	1
e. Trephine of frontal sinus	1
f. Sequestrectomy of zygoma	1
g. Tarsectomy	1
h. Mucous membrane transplant	1
Total	233

The time of operation, during which anesthesia was maintained by using pentothal sodium, varied from ten minutes to two hours. The average time for each case was about twenty to thirty-five minutes. We have used pentothal sodium in eight cases in which the time was over an hour, with two requiring two hours before completion of the case. In all of these cases no harmful effects were noted, and anesthesia was satisfactory throughout for both the surgeon and anesthetist.

The amount of five per cent pentothal sodium used in each case showed great variation. The smallest amount used was two and one-half cc. given to the oldest patient, a man of seventy-eight, for an evisceration operation which lasted for twelve minutes. This patient was awake upon leaving the operating room. The largest amount used was thirty-one cc. in a patient sixteen years of age who had a foreign body embedded in the cornea. This patient was under the anesthetic for two hours and ten minutes.

The period of recovery following the use of pentothal sodium varied as to the amount of barbiturate used. Twenty-eight cases recognized the anesthetist upon the conclusion of the operation and before leaving the operating room; the remaining slept on an average for fifteen minutes after leaving the operating room. Two cases slept for seven hours, the longest period of sleep post-operatively. These two patients were under the influence of pentothal sodium for one hour and forty-five minutes to two hours and ten minutes and had received twenty-eight and thirty-one cc. of pentothal sodium respectively for the time consuming operation. The greater the amount of pentothal sodium given, the longer the period of recovery will be and vice-versa if a small amount is used.

Post-operatively, the following sequelae were noted following the use of pentothal sodium intravenously; so-called respiratory complications which may be classified as follows: Mild cough three;

pharyngitis two; bronchitis one. To account for the above findings basal rales noted preoperatively in five cases and cough in two patients must be taken into consideration.

Circulatory manifestations were noted by the following signs as deviating from the normal and preoperative findings the arrhythmia in these cases being extrasystoles.

a. Tachycardia	16
b. Bradycardia	4
c. Arrhythmia	3

Preoperatively, four cases had extrasystoles, two a bradycardia with a pulse of fifty-eight, and eighteen cases had hypertension which remained the same after operation, and three had a hypotension with a pressure below 100 mm. systolic.

Central nervous system complications post-operatively were as follows:

a. Mild headache	17
b. Severe headache	2
c. Excitement	5
d. Emotional disturbance	2
e. Irrational	2

Headaches are quite frequently seen, however, following operations upon the eyes. The period of excitement and emotional disturbances were seen only during the period of inebriation or awakening and the patient was perfectly rational upon complete recovery.

Nausea and vomiting occurred in only forty-seven cases postoperatively following the use of pentothal sodium. Of these forty-seven cases, fourteen felt nauseated for two days following surgery. All of these patients, however, received morphine for their pain. In one case nausea was present for three days in a young girl of fifteen, following a second operation under pentothal four days after the first operation.

There were no abnormal urinary findings to suggest kidney damage. Other disturbing conditions were also noted following the use of pentothal sodium during the induction phase of anesthesia and postoperatively. There was hiccuping in one case during induction which disappeared when the patient was completely anesthetized. Sneezing was noted in two cases which gave an asthmatic history. Convulsions occurred during the induction phase in one case which disappeared when the patient was asleep. A severe generalized pruritis developed in one female patient ten hours following operation after the anesthetic effects of pentothal sodium had completely disappeared. The cause of the pruritis was not determined. The itching was quite annoying to the patient but cleared up in twelve hours, after treatment with calamine and phenol lotion.

A condition that is to be carefully guarded against is the injection of pentothal sodium solution into the soft tissues of the arm. This happened in three of this series. One young lady previously had pentothal sodium for anesthesia four days before in the same arm and vein. This particular patient complained of a sore arm for three days, as well as a feeling of nausea. The treatment for such is immediate stopping of the injection, aspiration of some of the solution if possible, diluting the solution by the introduction of distilled water into the area and hot moist continuous magnesium sulphate dressings to the site.

In concluding this report in which we have used pentothal sodium successfully and without harmful effects in 227 cases undergoing surgery upon the eye, emphasis must be placed upon the fact that pentothal sodium is a quick-acting barbiturate, and must be used with discrimination by a trained anesthetist who is able to cope with any emergency that might arise. Also careful selection of cases in which the anesthetist is to use pentothal sodium, ruling out definite contraindications as liver damages or severe dyspnea, as well as children under ten years of age, must be a factor to be considered. In the hands of an experienced anesthetist, pentothal sodium is quite safe as a general anesthetic and it is certainly much safer than ethyl chloride and ether.

## SUMMARY

Summarizing we find that pentothal sodium is a very efficient general anesthetic in eye surgery as shown in this series of 227 cases. Its special merits are:

- (1) Rapidity of induction and emergence from the depth of surgical anesthesia.
- (2) The apparent decrease of post-operative nausea and vomiting.
- (3) The greater degree of safety which it offers as compared with ethyl chloride and ether when administered by a competent anesthetist.
- (4) An anesthetic which the patient does not dread as he does the sight of the mask and ether can.
- (5) The minute to minute controllability of the pentothal sodium when used by the fractional method.
- (6) The removal of the anesthetist and his equipment from the operators field, allowing him greater freedom to work, as well as the abolishment of ether vapors which are distasteful.

Acknowledgment is made at this time for the co-operation received from Doctors E. J. Curran and E. E. Pickens, from whose services we selected our patients.



## REFERENCES

1. Lundy, J. S., General Anesthesia in Operations on the Eye, Ear, Nose and Throat. *Archives of Ophthalmology*, 17:137-145, No. 1, January, 1937.
2. Lundy, J. S., Intravenous Anesthesia; Preliminary report of the use of two new barbiturates protocols. Staff Meeting Mayo Clinics, 1:0 536-543, August 21, 1935.
3. Dixon, C. P., Some Observations on Pentothal Sodium, *British Journal of Anesthesia*, 15:60-61, January, 1938.
4. Mallinson, F. B., Pentothal Sodium in Intravenous Anesthesia, *The Lancet*, 2:1070-1073, No. 19, November 6, 1937.

## THE EFFECT OF MORPHINE ON INTESTINAL MOTILITY

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I have been repeatedly asked in recent years whether morphine is a stimulant or a paralyzant to intestinal peristalsis. I am reminded of what I have observed at alumni banquets as to the action of alcohol. Early in the evening it appears to be a stimulant but later on it undoubtedly is a paralyzant. It is a matter of dosage.

Likewise the action of morphine on peristalsis is a matter of dosage and duration of action. Also we must recognize that the action is different on the normal and on diseased intestine. Therefore dosage, duration, normal or inflamed are the factors we must keep constantly in mind.

In the kitchen surgery days after one made a diagnosis he gave the patient a quarter of a grain of morphine and then leisurely proceeded to the kitchen to put on the instruments. Experience taught that unless one gave the morphine at least an hour, preferably two, before beginning the operation one had better not give it at all. If one began the operation before an hour the patient was in a more excitable state than if no morphine was given. There was a preliminary stage of excitement which was made evident if one started to operate before it had passed. When morphine was given for the control of pain, as for kidney or gallstone colic, if there was no response in twenty minutes one considered the advisability of giving a second dose.

My study on the action of morphine on peristalsis was made by sewing a glass window in the abdominal wall of guinea pigs and other animals. By this means I was able to observe the action direct of various agents on peristalsis. The immediate effect of sewing in the window was of course to excite peristalsis by irritation. This was soon lessened as the tissues reacted to the injury. After a day the presence of the foreign body became tolerated and one could begin his observation. I do not remember the guinea pig dosage of morphine that would increase peristalsis but it was very small and even at that it was but temporary and ceased after an hour

or two. If one extranentates a loop of gut the action may be studied on the isolated loop. This method has the advantage in that the protruding loop is accessible for direct stimulation. The disadvantage of this method is that the act of stitching the loop into the incision tends to paralyze the loop.

Large doses of morphine of course paralyzes peristalsis completely after perhaps a short period of stimulation. Just what doses destroys peristalsis varies and the duration required for its action but for most adults it begins in an hour. One can observe this in doing abdominal operations under local anesthesia. Generally speaking there will be no peristalsis if one waits an hour after giving a quarter of a grain. This varies of course as to the nature of the stimulus. If one stretches a hollow viscus such as stretching the walls of the appendix during the old operation of appendicostomy or trying to slide a scoop over a stone in a cystic duct, pain will always be elicited and commonly with it a definite peristalsis, even vomiting.

I was able to make an interesting observation myself. In the days when it was sometimes necessary for me to perform operations while in the siege of a migraine I sometimes found it necessary to take a quarter of a grain of morphine. Quite regularly within twenty minutes after the injection of the morphine I would be seized by a very annoying diarrhea so that it was necessary to postpone the beginning of the operation until this period of hyperperistalsis was passed. The following day invariably there would be a definite constipation.

In the old days when surgeons thought milk was the proper postoperative diet the patients became enormously distended with gas about the third day. Because of the old through-and-through sutures commonly employed in that day to close the abdomen, large and repeated injections of morphine were required for the control of the pain. The result was invariably a highly distended abdomen which only time would remedy.

As every surgeon knows when the gut wall is inflamed peristalsis ceases unless there is an obstruction which dominates the picture.

The answer to the question therefore as to whether morphine paralyzes or stimulates peristalsis depends on the dosage and the duration of the action. Small doses soon after injection stimulate, large doses after say an hour invariably paralyze peristalsis.

More interesting than the relation of morphine to peristalsis is its effect on absorption. Whether the fluid in the abdomen is an exudate, induced by the injection of a chemical, or a solution injected into the peritoneal cavity absorption is definitely slowed.

(Continued on page 200)

## PRESIDENT'S PAGE

To the Members of The Kansas Medical Society:

On assuming my duties as your President for the ensuing year I want first to extend to you my thanks for the honor you have conferred upon me and likewise for the confidence you express by that honor. May I also state that I am not at all unmindful of the responsibilities that I am assuming. I ask of each of you your patience with my short-comings, and further ask of you your cooperation with me in an effort to carry forward the work of the profession.

I voice the sentiment of every member of the Society when I extend congratulations to the Shawnee County Medical Society for their efforts as our host at the recent State Meeting. It was an excellent program. I was pleased with the large attendance at the first meeting of the House of Delegates. It seems to me that the interest shown by everyone bespeaks a fuller appreciation on the part of the membership of our many responsibilities and also of the ever increasing importance of the work of the Society.

Our retiring President and his administration are to be congratulated upon the success of their efforts. Their work should serve as an inspiration to the incoming administration to continue their efforts. Their efforts were crowned by a very high degree of success and yet not all of those successes have been completed, and we must ask of the membership continued interest in those problems and a patience on the part of every member that the successes will be followed up and every effort made to make them secure.

Between now and the first of July we will be able to announce the reorganization of our committees and it shall be our effort to give to everyone an opportunity to have a part in the year's work. It will be our effort to continue in a general way the policy of previous administrations and insofar as it is possible to increase the emphasis upon professional improvement and opportunities for graduate study.

It seems to me that the public each year are showing, to an increased degree, their confidence in our profession. This confidence must be encouraged and our policies so shaped and our conduct so carefully considered, as to inspire further confidence and encourage the public to follow our judgment and teachings to even an increased degree. The public are constantly asking for information and further instruction along general health lines. This attitude on the part of the public entails increased responsibility and even more deliberate judgment on the part of the profession.

We, the officers of this administration, ask your indulgence and patience. We assure you that we will welcome your suggestions and your constructive criticism and solicit from you your greatest cooperation.

C. C. Nesselrode, M.D.,  
President.



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## EDITORIAL

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### PRESIDENT-ELECT LOVELAND

The choice of a successor to President Nesselrode follows the policy of awarding faithful service to our Society. Dr. Loveland has been Chairman of the Committee on Medical Economics since its formation doing much valuable work in a trying period, and has also been active in legislative work during the recent session.

He is a member of the Medical Board of the State Sanatorium at Norton and is in charge of Hillcrest Sanatorium at Topeka.

To Forrest L. Loveland, well known as an internist and for his genial disposition, we extend our congratulations and best wishes.

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### ANNUAL SESSION

The 80th Annual Session may well take its place among the other excellent meetings which the Society has held.

The close advent of the American Medical Association meeting in St. Louis had some effect on attendance but the final registration of 753 is comparable to former years and the state as a whole was well represented.

The technical exhibitors consisted of American Optical Company, General Electric X-Ray Corporation, George A. Breon & Company, Inc., Topeka Pure Milk Company, Westinghouse X-ray Company, Inc., Cole Chemical Company, The Denver Chemical Manufacturing Company, Riggs Optical Company, The Zeiss Company, M & R Dietetic Laboratories, Inc., Holland-Rantos Company, Inc., The Coca-Cola Company, Burroughs Wellcome & Company, Inc., A. J. Griner Company, C. B. Fleet Company, Inc., Lederle Laboratories, Inc., W. E. Isle Company,

Quinton-Duffens Optical Company, H. G. Fischer & Company, Eli Lilly & Company, Jones Metabolism Equipment Company, J. B. Lippincott Company, A. S. Aloe Company, Parke, Davis & Company, Gerber Products Company, Midwest Surgical Supply Company, Inc., Philip Morris & Company, Ltd., Medical Protective Company, Mead Johnson & Company, Petrolagar Laboratories, Inc., H. J. Heinz Company, Dictaphone Company, to which the Society owes much appreciation for their generous interest and support of the meeting.

The scientific exhibits were numerous, well presented, and well attended.

The program consisted of thirty guest speakers and it also lived up to the excellent precedent of former years.

Both sessions of the House of Delegates were well attended and several actions of importance were announced. New officers elected were as follows: Dr. F. L. Loveland, Topeka, President-Elect; Dr. C. D. Blake, Hays, First Vice President; Dr. H. N. Tihen, Wichita, Second Vice President; Dr. John M. Porter, Concordia, Secretary; Dr. Geo. M. Gray, Kansas City, Treasurer; Dr. J. W. Randell, Marysville, Councilor, First District; Dr. O. W. Davidson, Kansas City, Councilor, Second District; Dr. F. R. Croson, Clay Center, re-elected Councilor, Seventh District; Dr. L. S. Nelson, Salina, re-elected Councilor, Eighth District; Dr. G. W. Hammel, Hoxie, Councilor, Ninth District; Dr. L. S. Nelson, Salina, re-elected Chairman, Defense Board; Dr. W. M. Mills, Topeka, re-elected Chairman, Editorial Board; Dr. J. F. Hassig, Kansas City, and Dr. H. L. Snyder, Winfield, American Medical Association Delegates.

Kansas takes pride that its annual sessions are among the best presented in the country and Shawnee County Medical Society may also take pride that its efforts for the 1939 meeting were successful in continuing and improving this fact.

(Continued from page 197)

The action naturally is greater in the case of an exudate than on fluids introduced from without but it more closely simulates pathologic conditions.

Opium more definitely slows absorption and is more pronouncedly a paralyzant than morphine. The effect of opium on animals is more difficult to observe because it is difficult to introduce repeated doses of opium. Undoubtedly the effect of opium is to lessen absorption from the gastro-intestinal mucosa. In no other way can one explain the tolerance of the enormous doses which some of these patients receive. I observed one patient, being treated by an old time doctor, who received 776 grains of powdered opium in ten days, and recovered from both the disease and the treatment.

Obviously a renewed study, by competent physiologists, of the action of opiates on the gastro-intestinal tracts should be instituted. Even the study of laboratory experts might well consider the results of clinical observations.

Careful laboratory and clinical studies might result in a revival of the now forgotten opium treatment for diffuse peritonitis. No doubt this treatment saved many patients and is now preferable to operation in cases marked by severe distention. In these cases if surgeons would trade their scalpels for a dollar's worth of opium the patients would profit by the transaction.

December 29, 1938, Check Merchants National Bank .....	1,430.00
December 29, 1938, Check Merchants National Bank .....	2,235.00
January 7, 1939, Check Merchants National Bank .....	280.00
February 3, 1939, Check Merchants National Bank .....	575.00
Note in Riverview State Bank.....	5,000.00
March 25, 1939, Check Merchants National Bank .....	4,000.00
April 29, 1939, Refund Clarence G. Munns.....	46.45
April 29, 1939, Check Merchants National Bank .....	8,600.00
April 29, 1939, Check Merchants National Bank .....	1,630.00

Making a total for the year of.....	\$44,560.62
The Expenditures Were:	
General Fund .....	\$30,974.50
Defense Fund .....	1,358.04

Balance in my hands April 30, 1939.....\$12,274.53

The Journal fund is not figured in this report as it is kept in the Central National Bank in Topeka and at the present time amounts to \$1,154.67.

Herewith attached trial balance from the Riverview Bank which however does not include the three items, \$46.45, \$8,600, and \$1,630. Also trial balance of Central National Bank, Topeka, Kansas, showing a balance of \$1,154.67 in the Journal fund.

Respectfully submitted,

Geo. M. Gray, M.D., Treasurer.

The following report by Dr. H. L. Chambers, Secretary, was read and adopted:

TO: THE HOUSE OF DELEGATES

While the official year began at the end of the Wichita meeting, this letter begins with that meeting itself. In many respects this was the best meeting this Society has yet had, and the general feeling of a big job well done was never more pronounced. The day of sports and eats, including some drinks, put everybody in a good humor. The guest talent was as good as the local hospitality. The Hall of Health was something entirely new—and successful, the weather was propitious, and the attendance the best ever. The man who flew down from Chicago to speak for Federal Supervision of medical practice apparently aroused a more zealous interest than any other. He was almost carried away himself—only the activity of earnest guards prevented the banqueters from mobbing him.

President Melencamp introduced a new detail in the functioning of committees when he asked that, so far as might be found practical, the work of each should be portioned out among the individual members. This was not intended to lessen mass consultation and mass action, but rather to promote individual interest, individual information, and individual alertness in a better preparation for mass decisions. Experience of the year seems to show a reasonable success for this idea. There has been a definite broadening in the interest and understanding of the whole field in the minds of many members because they have made a personal and more or less intensive study of some special phase of the responsibilities of some particular committee.

Dr. Nesselrode's committee on Control of Cancer has

## OFFICIAL PROCEEDINGS

### HOUSE OF DELEGATES

The House of Delegates met in regular session at the Hotel Jayhawk in Topeka, at 8:30 p.m. on Tuesday, May 2, 1939.

Following call to order by Dr. N. E. Melencamp, President, Dr. H. L. Chambers, Chairman of the Committee on Credentials, reported that no special problems had arisen as to the seating of delegates.

The minutes of the last meeting were approved as printed in the Journal.

The following report by Dr. Geo. M. Gray, Treasurer, was read and adopted:

TO: THE HOUSE OF DELEGATES

As Treasurer of your Society, I herewith submit the financial standing of funds in my hands as of April 30, 1939.

Your cash balance in my hands on April 30, 1938, was \$13,510.81. During the year, I received \$444.81 as refund from Sedgwick County Medical Society.

November 29, 1938, Check Merchants National Bank .....

\$ 6,855.00



continued to function in about the same manner as for the last several years. A competent man, especially skilled and experienced in presenting the subject of cancer to both professional and lay audiences was induced to hold twelve meetings—two or three sessions each, in as many Kansas cities. The itinerary was arranged to reach as many new people as possible. The material offered was excellent and was much appreciated by those who came to hear it,—there should have been more of the profession and other intelligentsia. The Women's Field Army has operated with great enthusiasm and promise. The Women's Field Army has become a great aid in spreading information about cancer and in making it really "register" on people. Its motto or slogan alone is a powerful promoter, "Fight Cancer With Knowledge."

Dr. Tihen and his Committee on Control of Tuberculosis have still further consolidated the efforts of the several groups especially interested in this field. The case findings clinics are better manned and better attended, the recognition and investigation of contacts has been more systematized, the identification of sources has been emphasized, and the follow up on cases and contacts has been made more consistent and more effective. As in other fields of health and hygiene, a studied attempt has been made to make the public health conscious, to promote early recognition of even premonitory conditions, and to start corrective measures early.

The Committee on Conservation of Eyesight has continued and greatly enlarged its activities of last year. The educational leaflets were used with reasonable cooperation by teachers and others. Friendly and cooperative relations were maintained with the State Boards of Social Welfare and of Administration. Friendly relations with the State Ophthalmologist have continued. Aid was extended to legislators to the formation of more sight saving classes, and to others interested in this field. This committee has kept up its section in the Journal, has done the pioneer work looking to graduate instruction, and has gathered some material for research work—notably that sent to the Memorial Ophthalmic Laboratories of Giza, Egypt, for a forthcoming world report. Dr. Powell is to be congratulated on the work and outlook of his committee.

My own observation is that only a few philosophically inclined doctors can be kept long interested in medical economics. Most of us are so poor we can attend only to immediate and imperatively pressing needs, and have no time nor energy for abstract study, or so comfortable that we do not have to think of economics and do not want to anyway. Dr. Loveland's committee has been on the job during the year. They held frequent conferences with the Social Welfare Board, digested the action of the special session of the House of Delegates, boosted the economic survey for Kansas clinicians, studied the prepayment and Farm Security plans for medical attention, and decided that any plan having to do with installment payments for hospitalization should not cover or include the physicians' services.

The Committee on Auxiliary under Dr. C. Omer West's energetic management seems to have operated under the motto: "You ain't seen nothin' yet." It took up President Melencamp's idea of decentralization and put Dr. Morrow on the job of getting and placing better health books into the schools, Dr. Black worked on a plan for public health exhibits at various public functions, Dr. Gloyne worked to promote county medical societies to the groups of women's clubs and the like and Dr. Raines worked for increased

membership and on the program for the Topeka meeting. The committee supported the Auxiliary in organizing new counties, in a campaign for educating the lay public in things medical, in service in the Women's Army and in boosting for better cooperation for Cancer Control work, and collaborated on assistance to the legislature.

The committee on Pharmacy became a sort of liaison committee and did much interesting work in connection with other committees and even with other professions. It realizes that none of us may or can stand alone. It finds the barbiturate question growing so fast that it is difficult to keep up with it but hopes to have a workable law ready to propose to the 1941 legislature.

Since Dr. Sherwood is in education, it was no surprise that his committee on Public Health and Education should seek to do its work through the Kansas State Teachers Association. Commendable progress has been made and concrete results are expected to show in the oncoming citizens of Kansas. The committee started some work on the health officer problem and on milk ordinances, but neither is yet completed.

In the summer of '38, the man at the head of Safety and Traffic Control of the State Highway Commission asked for a committee on Automobile Accidents and President Melencamp named one with Dr. A. K. Owen as its chairman. This committee is now working out a program for the 1939-'40 group to carry out.

The Committee on Venereal Disease has made some progress in developing professional interest in this field. With the full approval of several interested organizations, especially that of the State Board of Health—it has arranged and carried out a program similar to that of the Cancer Control work of the last several years.

The Medical School is and doubtless will always be the leading medical center for Kansas. Its committee, headed by Dr. Fred McEwen, has brought to the school the suggestions, the support, and above all the loyal interest of the Kansas profession. It has also helped to make it easier for the information, the experience, the outlook, and the inspiration of the school to contact and be assimilated by the clinicians of the state.

There are eight other committees, such as Borderline Groups, Endowment, Hospital Survey, etc., working out of the state Society. Their reports will be made to the House of Delegates along with those particularly mentioned in this letter. Some or all of them will be published in the Journal and may be seen there.

Looking in any direction in the field of our interests, one sees Dr. F. P. Helm, the Secretary of the Kansas State Board of Health. He is informed, interested, competent, and his energy is tireless. His cooperation and assistance to each of our committees has put us all deeply in his debt.

During the year, the Kansas Society through its various working units has done so much and done it so well, that in the mere reporting of it, I have used up about all the superlatives I know and Executive Secretary Munns has not yet been mentioned. With the possible exceptions of President Melencamp and Chairman Duncan, Munns deserves more superlatives than anybody else. Judged by what he did, by the difficulties he overcame, by the importance of his results, by the methods he employed, by the frictions he avoided, or by the friends he made, he merits superlatives and many of them.

Respectfully submitted,

H. L. Chambers, M.D.  
Constitutional Secretary.

The next order of business was the Executive Secretary's report by Clarence G. Munns, which was read and adopted.

The following report was presented on behalf of the Editorial Board by Dr. W. M. Mills, Chairman:

TO: THE HOUSE OF DELEGATES

The Editorial Board submits the following report for the period from May 1, 1938, to May 1, 1939.

A financial statement for the Journal showing all income and expense to and including the April 1939 issue reflects the following condition:

Financial Report of The Journal of the Kansas Medical Society May 1, 1938 to May 1, 1939

Cash in bank (as of May 1, 1939, not including total income or expense of April 1939 issue)	\$1,154.67	
Checks deposited April 29, 1939 not included in yearly statement	90.60	
	<u>\$1,245.27</u>	

Standing of Journal funds (including April 1939 issue)—Assets.

Cash in Bank	\$1,245.27	
Good accounts receivable (including April)	651.30	
Cash in mailing fund	25.00	
	<u>\$1,921.57</u>	\$1,921.57

Liabilities:		
Accounts payable (April issue)	413.57	413.57
		<u>\$1,508.00</u>

Income:		
(May 1, 1938 to May 1, 1939)		
Advertising	\$6,283.13	
Subscriptions	52.00	
	<u>\$6,335.13</u>	\$6,335.13

Expense:		
(May 1, 1938 to May 1, 1939)		
Salary	\$1,222.00	
Printing	4,027.99	
Engraving	306.49	
Stationery and Supplies	95.07	
Mlg. Journals	175.00	
Stamps	130.18	
Drayage	10.25	
Reprints	18.36	
	<u>\$5,985.34</u>	\$5,985.34

Surplus for year..... \$ 297.79

The surplus of \$297.79 shown for the past year may be compared with the surplus of \$243.34 shown for the year of 1937-'38. Likewise, the balance on hand of \$1,245.27 may be compared with a balance of \$1,138.99 a year ago.

Advertising income for the past year totalled \$6,335.13 compared with \$4,821.91 in 1937-1938. On the other hand, printing expenses increased by approximately \$600.00, and through a decision by the Board to employ the central office assistant assigned to the Journal, full time instead of part time, salary charges to the Journal increased

from \$684.00 to \$1,222.00. The Journal also purchased an electric addressograph which is available for use by the Society and the publication.

The Journal pays for its own stationery, supplies, and stamps, and an attempt is made in every way to see that the publication is self-supporting.

The Board recently investigated the prices charged for reprints by other medical journals in the mid-west. This investigation revealed that the prices charged by the printers of the Kansas Journal are more or less average for state journals, but it is the hope of the Board that further reductions may be obtained in these prices so that more authors may take advantage of this opportunity to secure reprints of their articles printed in the Journal.

The Journal has followed a policy during the past five years of accepting no profits on reprints. Each reprint order is forwarded to the printer, and the printer retains all collections.

The cover of the Journal was changed, effective with the January 1939 issue. The size of the Journal and the type remains the same.

The regular sections of the Journal which include Cancer Control; Eye, Ear, Nose and Throat; Medical Economics; and Tuberculosis have been continued through the year and these have largely been supervised by various Society Committees.

The students of the University of Kansas School of Medicine are being supplied with the Journal at cost price following the precedent set three years ago.

The books received for review purposes are donated to Stormont Medical Library, and all exchange publications are forwarded to the Library of the University of Kansas School of Medicine, in Kansas City.

The Editorial Board believes that Kansas members can and should prepare a larger number of scientific papers, not only for the Journal, but also for publication in the Journals of the American Medical Association, and other ethical medical periodicals. The Board would like very much to secure a greater number of scientific papers prepared by members and any assistance county society secretaries and other members can give in this direction will be greatly appreciated.

It is the desire of the Editorial Board that the Journal shall continue to improve and that it shall completely represent the interests and activities of our members. Any criticisms or suggestions which the House of Delegates, the Council, officers or members of the Society may care to make will be gratefully received by the Board.

Respectfully submitted,

W. M. Mills, M.D.

Chairman Editorial Board.

The report of the Defense Board was adopted as printed in the Journal.

Dr. N. E. Melencamp, President, moved that the reports of the Councilors be adopted as printed in the Journal. Seconded and carried.

The following Councilor reports not printed in the Journal were read and adopted:

TO: THE HOUSE OF DELEGATES

Herewith is the councilor's report of the second district for the year 1938-'39.

1—Number of members in each county society.



Anderson 9. Douglas 37. Franklin 15. Johnson 24. Linn 9. Leavenworth 21. Miami 18. Wyandotte 129. Total members in the district 262.

2—Number of M.D.'s in each county.

Anderson 13. Douglas 51. Franklin 19. Johnson 26. Linn 9. Leavenworth 28. Miami 26. Wyandotte 162. Total in district 334. Many of these are not practicing and some are not desirable as members.

3—Names of M.D.'s reported to us in each county who are not now members and whom we suppose should be members:

Anderson—Drs. Hatfield, Northrup, Porter and Schaumloffel.

Douglas—Drs. Clark, Maust and Palmer.

Johnson—Dr. Wilson.

Franklin—Drs. G. W. Davis, Josephine Davis, Scott, Smithheisler.

Linn—None.

Leavenworth—Drs. Brown, Swann and Thomas.

Miami—Drs. Douglas, Helman and several others who are employed at the State Hospital at Osawatomie.

Wyandotte—Drs. Blount, Love, A. S. J. Smith, Harry L. Smith and Keefer.

These and any others whom we may have overlooked I would advise that they owe it to themselves, to their profession and to their community to immediately make application and join with organized medicine. The time has long passed when one can successfully practice medicine in isolation.

4—Number of regular meetings of each county society held during the year.

Anderson 12, Douglas 12, Franklin 6, Johnson 2, Linn 2, Leavenworth 20, Miami 3, Wyandotte 17. This part of the report is not correct as some of the societies only reported the meetings held since the installation of new officers in 1939.

5—Average attendance at regular meetings of each county society during the year.

Anderson 5, Douglas 19, Franklin 7, Johnson 10, Linn 7, Leavenworth 10, Miami 12, Wyandotte 32.

6—Number of special meetings of each county society during the year.

Anderson 6, Douglas 0, Franklin 1, Johnson 1, Linn 5, Leavenworth 3, Miami 2, Wyandotte 5.

This again, is not accurate for some societies only reported the special meetings held after the inauguration of the new officers. Besides the above, President-Elect Dr. C. C. Nesselrode, gave a dinner and the councilor gave two dinners for the presidents, secretaries and members of the legislative committees of each of the county societies in the district having an average attendance of 16 at each meeting.

7—Special methods reported by each county society for lay medical advancement.

Douglas—Two paid advertisements in the newspapers.

Franklin—Two half page advertisements in the newspapers. T. B. testing of school children.

Leavenworth—Advertisement in the newspaper.

This only represents a small fraction of the special work done for every member, with few exceptions, in the district, was alert and energetic and responded promptly when duties were assigned them. They gave freely of their time and worldly goods.

At this time I wish to thank the officers and members of each society for their loyal hearty cooperation.

Respectfully submitted,

L. F. Barney, M.D.

Councilor, Second District.

#### TO: THE HOUSE OF DELEGATES

During the past year we have had the loyal cooperation of each county society in our district. Each of our members has been unusually active and loyal to our State Society. Each society in the district is well organized and conducts scientific and business meetings regularly, and have given their complete cooperation, and have not only given their cooperation, but have given their time whenever their assistance has been needed during the past year.

Respectfully submitted,

W. P. Callahan, M.D.

Councilor, Sixth District.

Upon a motion made and carried, it was agreed that the regular order of business should be interrupted to discuss the following special orders of business:

Upon a motion made and carried, a vote of confidence was given to the Board of Medical Registration and Examination in its handling of violations of the Medical Practice Act and any assistance desired by the Board from the Society was pledged.

Upon a motion made and carried, it was agreed that the Council shall be empowered to levy a special assessment in any amount necessary up to \$5.00 during the year 1939-1940 and that particular effort should be made to collect any outstanding special assessment remittances.

Upon a motion made and carried, it was agreed that unpaid assessments shall be equivalent to unpaid dues insofar as Society membership is concerned.

Discussion followed concerning the following additions and changes to the Constitution and By-Laws:

1. Amendment to the Constitution concerning addition of immediate Past President to the Council.

2. Amendment to the By-Laws concerning addition of immediate Past President to the Executive Committee.

3. Amendment to the By-Laws concerning recognition of Section on Ophthalmology and Oto-Rhinology as an Official Section of the Society.

4. Amendment to the By-Laws concerning number of delegates for each Specialty Section.

5. Amendment to the By-Laws concerning Delegate-Elect for American Medical Association House of Delegates Meeting.

6. Amendment to the By-Laws recognizing certain special committees as standing committees.

7. Amendment to By-Laws concerning composition and duties of the additional standing committees.

Dr. N. E. Melencamp, President, appointed the following Reference Committee on Constitution and

By-Laws: Dr. A. W. Fegrtly, Wichita; Dr. H. L. Chambers, Lawrence; Dr. L. G. Allen, Kansas City; Dr. W. F. Bernstorff, Winfield; and Dr. E. C. Duncan, Fredonia, to consider the above proposals and to report thereon at the May 4 meeting of the House of Delegates.

Upon a motion made and carried the Executive Secretary was instructed to forward a telegram of well wishes to Dr. E. C. Duncan, who was unable to attend the Annual Session by reason of illness.

The regular order of business was then resumed.

The report of the Committee on Public Policy was adopted as printed in the Journal.

The report of the Committee on Control of Cancer was adopted as printed in the Journal.

The report of the Committee on Public Health and Education was adopted as printed in the Journal.

The report of the Committee on Hospital Survey was adopted as printed in the Journal.

The report of the Committee on Auxiliary was adopted as printed in the Journal.

The report of the Committee on Conservation of Eyesight was adopted as printed in the Journal.

The report of the Committee on Control of Tuberculosis was adopted as printed in the Journal.

The report of the Committee on Allied Groups was adopted as printed in the Journal.

The report of the Committee on Pharmacy was adopted as printed in the Journal.

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The following is the report of the Committee on Scientific Work:

#### TO: THE HOUSE OF DELEGATES

In former times this committee solicited papers, addresses, and the like along with scientific demonstrations and arranged them into a program for the State Meeting. In recent times it has become the custom for a committee of the host society to do these things. The increased attendance at the meetings and the improved quality of the programs are a clear enough demonstration that the new way is better. We now recommend that the present custom be recognized as the approved one and that future Presidents should consider the appointment each year of at least one member from the host city to facilitate and coordinate the work of the local and our committee.

Our committee gave some consideration to the matter of specialists and and specialism. We are making no definite recommendation now, but do realize that the present movement toward the socialization of medical practice succeeds mainly through the strategic placing of specialism and specialists, that the public demand for specialized care is rapidly increasing. On the other hand, the recent graduates are more competent in special fields than were the so-called specialists of a generation or so ago and can readily do most of the work that formerly went to

special consultants. Also the means of transportation are so much more safe, dependable, and efficient that patients may easily reach real specialists and well-organized medical centers from practically anywhere and do it in a few hours. It is our present feeling that the clinicians should try to exercise more general supervision in these matters.

Careful and thoughtful observers have long recognized that treatment goes along in modes, fashions or maybe one should say "fads." Even surgery which is rather more definite and concrete than drug therapy is subject to these waves of popular information, enthusiasm, misinformation, propaganda, or what have you.

Nearly or quite all the common operations have been in times and in places over publicized and over popularized. The same is true of drugs as they are developed or brought before the profession. The committee feels that the clinician should not allow himself to be much swayed by newspaper reports, or lay magazine articles about new drugs or new modes of treatment. We still have this conviction after we have tried to consider the pressure and even "heat" likely to be applied to him by those who think of themselves as up to date. His protection and defense must be kept up all the time, but while he dare not employ all the fads or experimental things his friends hear about, neither may he allow himself to become what they will consider an obstructionist or a has been. The whole category of new things might be arranged in a series, one end of which would be frankly commercial, the opposite end would be made up of things representing real therapeutic and pharmaceutical advances, while the middle would be a scrambled mixture. We believe that annually due notice might be accorded the newer drugs and therapeutic measures which may have been introduced or advanced in the preceding year. Such notice might be in the form of a resume published in the Journal of the Society once yearly. The committee considers as examples—the use of insulin and metrazol in the treatment of certain mental disorders, the response of certain streptococcal and various other bacterial invasions to sulphanilamide, the more recent treatment of the pneumonias by sulfapyridine, and the vitamins, especially the complexes of vitamin B and the relation of some of the others to the coagulation of the blood. The clinician's responsibility compels him to get and use what is worthy. The committee believes it scarcely practical for us to undertake to separate the worthwhile from the otherwise but do recommend that the prescriber try to know more of the background of a new remedy than the mere recommendation of a detail man. As a rule of thumb for everyday guidance, we paraphrase Pope and say:

"In drugs as fashions the same rule will hold,  
Alike fantastic of too new or old,  
Be not the first by whom the new is tried  
Nor yet the last to lay the old aside."

The growth of medicine is so varied and poly-directional as well as so rapid and so great that the graduate who knows it all on the night of his graduation finds himself definitely behind when he looks around the next morning. This seems to be the background for the inevitable relative slippage that comes to each of us. Also one may be counted on to need some reminding and some new patterning of what he already knows as he grows older and has to make the continuous adjustments in perspective that the practice of medicine compels. Consultation with men in other regions and comparison of other methods with one's own are inspiring, enlarging and ennobling. A half year or



more in Vienna once in a life time is a fine thing if one's situation permits it, but it is not enough. The indication seems to be for some shorter, some more frequent and some definitely recurring graduate work. It may be that the clinics of the medical school, and its extension courses make up part of the answer. Surely, the courses now offered by the Board of Health for the Social Security set-up are helpful. Last year, this committee recommended the attendance at three or more intersectional meetings, one of which should be that of The Kansas Medical Society. This year we discussed the advisability of requiring evidence of at least five days' graduate work of some sort outside the state during the year immediately preceding the re-registration. How do you react to that?

It is probably not useful and even unwise to make comparisons on the relative importance of the basic sciences for each seems indispensable, but just now the committee feels that the field of pathology needs some special cultivation. General and special pathology, in our opinion, need some revival in the minds of the profession. Some instruction that would coordinate what the physician knows with what he does and has to do, along with a better and fuller knowledge of pathological functioning would enable him to make vastly better and more useful evaluations of the case histories that he takes.

Using "Medicine" in the general and complete sense, one may say that it has no particular science, but is rather a hodge podge of all sciences—even a study of the stars may quiet a troubled mind and the seers of all ages have noted that a contemplation of the moon and basking in moonshine tends to increase the population. The so-called physical agents of therapy, prophylaxis or good hygiene are undoubtedly of fundamental importance, for without them no one could live. While much is known about them in a truly scientific way, their use in healing disease, in preventing disease, or in maintaining health is still largely a hit or miss matter, mostly miss. The oldest of them in point of time they have been used—namely, diet and climate, are probably used with least reference to their scientific possibilities. On the other hand, some of the agencies whose possibilities have been discovered in relatively recent time are employed much more intelligently and successfully. Such are radium and the x-ray. We note there are several factors causing this situation. One is that while diet and climate are within the reach of everybody and with practically no special apparatus or expense, radium and especially x-ray may be used or applied only at considerable expense of time and money and apparatus—hence have remained in the control of scientifically trained and specialized people. On this background their application has been and is, in general, much more safe, scientific and successful. Also, we see in the fact that some procedures show their results immediately and spectacularly whereas others show slowly and unostentatiously an even stronger reason for their more scientific employment. The thing works both ways—it interests, attracts, intensifies, and stimulates bright people to see things happening—results coming right up over the horizon. Furthermore, the outcome of things is so obviously connected with what the doctor does that the pressure of public opinion and maybe of damage suits tends to keep him in the sane and scientific path. Between the extremes in the agencies of physio-therapy as above suggested, are numberless other agents, many of them not exactly physical, but resembling diet and climate in that their actions or effects are slow and more or less insidious. Many or all the biologicals belong in this group and may do

great harm because they are potent, but slow and not plainly and immediately evident in their effects. Reread our paragraph on new drugs.

#### Summary:

1. We recommend a new consideration when making up the personnel of this committee.
2. Those who are striving to install a governmental control of medicine and the medical profession are advancing fastest in their strategic use of specialism and specialists. Watch your step.
3. We recommend an alert but careful attitude toward new therapeutic agents and new modes of therapy.
4. We recommend more professional association—especially with those a little distance away. This is the essence of graduate education.
5. We believe a renaissance in pathology would be good for us all.
6. Physical therapeutic agents including biologicals are potent and dangerous, know more about them.

Respectfully submitted,

H. L. Chambers, M.D., Chairman,  
Committee on Scientific Work.

The following is the report of the Committee for Study of Heart Disease:

#### TO: THE HOUSE OF DELEGATES

The Committee for the Study of Heart Disease of The Kansas Medical Society has been quite active since its appointment last fall by President Melencamp.

Communications to all state societies in America have supplied the committee with outlines used in other states. The American Heart Association has offered its assistance in the program of the Kansas committee. The work of the committee progressed rapidly until the collection of data was undertaken. This takes time. Data on living cardiacs was deemed worth while. Three sources are being used for statistics: The Vital Statistics Department of the Kansas State Board of Health in Topeka (Dr. F. P. Helm); twenty selected hospitals; twenty-five men known to be particularly interested in cardiology. The information from Topeka (vital statistics) has been received and several hospitals in the cooperating group have compiled the data and sent it to the committee. The individual men asked to cooperate with the committee by going through their private case records will require several months to complete their surveys.

The hospitals were asked to supply a list of the last fifty heart diagnoses of patients who were discharged with a statement of the age, sex, and race of each patient and other similar list of the last fifty persons who died while hospitalized.

The twenty-five men over the state who have consented to cooperate were asked to supply the diagnoses of the last 100 consecutive ambulatory heart cases seen in their practice. These men were asked to report the diagnoses according to the recommendations outlined in the booklet "Criteria for the Classification and Diagnosis of Heart Disease" which is the plan advised by the American Heart Association. Recently the committee has had the good fortune of going over the outline of its work with Dr. William D. Stroud of Philadelphia, President of the American Heart Association. It is hoped that a meeting can be arranged on the first day of the meetings of The Kansas Medical Society of all Kansas men interested in cardiology. If sufficient interest exists it is possible a Kansas State Heart Association can be formed and given a charter by the

American Heart Association. This liason group might thence function better to the interests of the Kansas Heart Committee and The American Heart Association. Ultimately by such cooperation it would be possible to offer the general profession and the people of Kansas some real benefits of the work now under way. Recognition of the work now under way here in Kansas is being given in a current Bulletin of The American Heart Association.

Since the men who are cooperating in the survey are all in active practice it is impossible for them to check through their records in a few weeks and their reports will require several months for completion. Ultimately it is hoped that every heart diagnosis on hospital records, death certificates, etc., in Kansas will include a statement of: 1. Etiology; 2. anatomical changes; 3. physiological changes; 4. functional capacity (1, II-a and b, III) detailed elaboration of these diagnostic aspects is to be found in the booklet "Criteria for the Classification and Diagnosis of Heart Disease"—first published by the Criteria Committee of the Heart Committee of the New York Tuberculosis and Health Association. This booklet is now being appended and republished by the American Heart Association.

Respectfully submitted,

Philip W. Morgan, M.D., Chairman,  
Committee for Study of Heart Disease.

The following is the report of the Committee on the School of Medicine:

#### TO: THE HOUSE OF DELEGATES

The committee held two meetings during the year. The first meeting was held on October 5, 1938, at the Medical School in Kansas City, Kansas. At this meeting Dr. H. L. Snyder and Dr. L. J. Beyer of The Board of Regents and several members of the faculty of the Medical School were present. Plans were discussed relative to the needs of the Medical School and projects to be studied and taken up at the December meeting. Through the courtesy of Dean H. R. Wahl the committee made a tour of inspection of the school and hospital. The large corridor section which joins the hospital and the new clinic building and will house x-ray, storage and other departments was just about completed. The Clinic Building and the Childrens Building are completed but the top floors not finished. They have no elevators and lack equipment. The committee agreed that these buildings should be provided with suitable equipment and put into operation as soon as possible. It was very much pleased also with the progress being made at the School and felt that Dean Wahl and the officials of the School deserve great credit for the great improvements which have and are being made. The committee was pleased to find a fine and willing spirit of cooperation. Real progress is being made and every physician who has not visited the Medical School in recent years should do so.

The second meeting of the year was held at Emporia, Kansas, on December 18, 1938. At this meeting we were again pleased to have Dr. H. L. Snyder and Dr. L. J. Beyer of The Board of Regents as well as Dean H. R. Wahl, Dr. N. P. Sherwood and Dr. O. O. Stoland of the faculty present. The committee considered and acted on a number of problems as follows:

1. Recommended that the Medical School avoid as far as possible any competitive practice of medicine with the physicians of the state. The committee felt that the work of the school should be limited to indigent groups. Dean Wahl presented a complete survey of the admissions of patients to the clinic and hospital. The committee approved

the report and requested that it be published in the journal in connection with Dean Wahl's annual report which will follow this report in the Journal.

2. Heard the report of the faculty and endorsed the need for a new Medical Science Building at Lawrence, Kansas, to house the preclinical branches which are poorly housed and scattered in other buildings at the present time.

3. Considered the urgent desirability of endowment funds for research purposes which might be made available to the school from foundations, government agencies, commercial firms and others. Several fine projects have been started during the past year but more are needed.

4. Recommended that Dean Wahl provide a short article for the Journal making known the new and old facilities at the Medical School for the assistance of the physicians of the state.

5. Recommended that the faculty and staff of the Medical School provide regular monthly articles for the Journal reflecting the work and proceedings of the staff.

6. Considered the system of admissions to the Medical School and agreed that the present system for the admission of students is satisfactory and as fair as possible in a state school.

The committee has found the spirit of helpful cooperation and understanding ever more present in its contacts with the executives and members of the faculty and staff of the Medical School. Dean Wahl and his entire staff are to be commended for their splendid work in building a fine Medical School in Kansas.

Respectfully submitted,

Fred J. McEwen, M.D., Chairman, Committee on the School of Medicine.

The following report was submitted by Dean H. R. Wahl of the University of Kansas School of Medicine.

Total number of students enrolled in medical school....	328
Number of freshman students (this includes eleven special students taking part-time work).....	91
Number of students enrolled in Kansas City, Kansas....	233
Number of senior students (this includes one special student) .....	71
Number of student applications received from Kansas..	147
Number of students placed on the waiting list.....	53
Number of students from Kansas admitted early in summer .....	73
Number of these students who did not enter medical school .....	14
Number of Kansas applicants not eligible.....	31
Number of Kansas applicants fully qualified, but not admitted .....	39
Number of freshmen students marked "special".....	11
Number of Kansas men studying medicine.....	361
Total number of applicants.....over	600
Total number of applicants from Missouri.....	17
Number of students admitted from Missouri.....	7
Number of Kansas residents admitted in regular class..	73
Number of Kansas residents as special students in freshman class .....	11
Number of nurses in training.....	91
Number of nurses in graduating class.....	24
Number of student nurses with college degrees (combined degrees) .....	27
Number of student nurses with one or more years' college work .....	10



The physical plant in Lawrence still remains very crowded. A request to the present legislature to erect a combined pharmacy and medical science building was not successful, owing to lack of funds, and the status there is the same as it has been the last ten or fifteen years, with marked crowding in the biochemical classes, division of physiology in several different buildings, and housing of the anatomy department in a wooden, temporary structure. Facilities should accommodate at least one hundred students, while the present accommodations are sufficient for only seventy. A very serious condition at Lawrence is the lack of anatomical material. Although there is a state law authorizing all unclaimed bodies to be forwarded to the medical school, comparatively few reach the medical school. In spite of repeated requests to undertakers and county authorities as well as state institutions, the anatomy department is having difficulty in getting material for dissection. It is hoped that members of the medical profession can stimulate local authorities to forward such material to the University. The University pays every undertaker \$35.00 for preparing the body for transportation, and also pays the transportation expenses.

There have been some minor changes in buildings since the last report. The Connecting Corridor is now completed. It is at the present time housing the new storeroom for the entire plant, and the last legislature appropriated \$12,000 for new x-ray equipment which will be placed in ample quarters on the second floor of the Connecting Corridor. Inasmuch as this money is available, we are hoping to move the X-ray Department into the Corridor by the first of July.

The colored unit is also in the course of construction, and will probably be completed early this summer. The legislature appropriated \$75,000 for this unit, and with an additional grant from PWA of \$61,363, this unit will be erected one story higher for internes' quarters, and will provide complete equipment. The building is being erected at a total of \$136,363.

The Hixon Laboratory for Medical Research is also completed. We received an additional gift of \$45,000, and to this amount was added a PWA grant of \$28,636. This building is erected to a height of four stories, with a roof designed for the housing of dogs. On the third floor of the building, a library for medical history and a museum of medical history is being constructed. Additional gifts are in prospect for the completion of this part of the research unit.

The last legislature appropriated funds to further the development of the buildings already erected. The funds appropriated are as follows:

X-ray equipment in the new Connecting Corridor.....	\$12,000
Completion of the Children's Pavilion with equipment for the first two floors.....	10,000
Equipment for kitchen and basement of Clinic Building .....	10,000
Completion of second floor of new Clinic Building .....	20,000
Equipment for the Clinic Building.....	10,000

In addition, the legislature provided a small increase in maintenance and salary funds to aid in the maintenance of the four new buildings (Hixon Laboratory, Children's Pavilion, Connecting Corridor, and Clinic).

During the past year, a gift of \$1,500 was obtained to provide a Research Fellowship in the Department of Medicine, given by George A. Breon. This is to become an annual gift for the next four or five years, and is to provide assistance for research facilities being developed here. A few other research projects are also in prospect.

As soon as the Clinic Building is completed, and the colored unit, which will be known as the Negro Pavilion, is ready for occupancy, the present barracks buildings will be torn down, and will be entirely removed thereby eliminating one of the eyesores of the institution.

There have been a number of changes in the medical school curriculum. The course in Medical Economics has been revised, and in addition to lectures by doctors of the state, a well-organized course of eight lectures has been given by Dr. F. L. Loveland of Topeka. This has been very favorably received by the student body. Other changes in the curriculum have to do with reducing the total number of hours by five hundred, and substituting elective courses. This is done by schools over the country to reduce the number of hours of required work and allowing elasticity of courses in accordance with the individual student wishes.

The Out-Patient Department continues to be one of the most active divisions of the medical school; over 77,000 visits were recorded last year. Every patient has to pass through the Social Service Department before being considered eligible for examination and treatment in the Clinic. Each patient is asked whether he has a family doctor, and as soon as the name of the doctor is given, the social worker writes to the doctor asking if he has any objection to our treating the patient. In the meantime, the patient is given temporary treatment until a letter is received from the doctor stating that such treatment meets with his approval. This is also true of local patients. Of course, there are some abuses of our Out-Patient Department, but we are trying to reduce this to a minimum, and we would greatly appreciate a letter written to the Dean by any doctor who knows our Clinic is being used by a patient who can afford a private doctor. We can assure the doctor that the source of such information will not be divulged. Our Social Service Department is small, and it is almost impossible for the workers to interview each individual case, so we need the medical profession to help us weed out cases that might otherwise slip by.

A growing division of the school is the Convalescent Ward. We have an increasing number of patients coming here for x-ray treatment or merely diagnostic work. These patients go to the Out-Patient Department for this work, and stay in the Convalescent Ward at a rate of \$1.50 per day. Most of these patients are county patients, referred to the Convalescent Ward until diagnostic work is completed; this usually requires three to five days. We have had 258 patients in this ward from Kansas in the last year. In the past year, we have treated 1,077 county patients in the hospital, eighty-seven of the counties in the state being represented by this service. The total number of patients in the hospital in the last year amounted to 5,719; the total number of patient days, 90,792.

The hospital has 325 beds, including bassinets. With the opening of the colored hospital and the children's building, this will probably be increased to 375. Of this total number of beds, only thirteen are private beds. The actual private patient number is small, and the income by the doctors is, therefore, small, for it is only the private-room patients who pay the regular professional fee. There are 181 members of our faculty, all of them having a right to send patients into our private rooms; it is obvious that no one man can get much of an income from this source. Patients on the wards rarely pay a professional fee, and if it is paid, it is usually reduced. County patients, of course, pay no fee.

The Post-Graduate Courses held here this month proved to be quite a success. One hundred twelve enrolled, and

the course covered a period of four days on subjects of interest to the general practitioner. The Post-Graduate Clinic will be repeated next year, and it is hoped that some additional work of value to the practitioner can be devised within the next year. It is also hoped that an opportunity will become available for those in practice a few years to get a residency in the hospital as well as the more recent graduates. It is being recognized by the faculty that the medical school is obligated not only to teach the students to practice medicine, but also to keep them informed from year to year of the advancements in medical sciences. It is also being recognized that the medical school should provide increasing opportunities for training in specialties not only for graduates but for those men who have been in practice a few years. Details for this are being worked out at present, but naturally, we will be handicapped until more funds become available.

One of the problems the medical school administration has to contend with is the inability of the school to take care of well-qualified applicants from Kansas who want to enter medical school. Thirty-nine students were qualified, but could not be admitted, nor could they go elsewhere. At the same time, communities over the state are crying to us for doctors to locate in their towns. It is for this reason we are planning on extending the medical school work by utilizing the summer vacation, giving students opportunities to get work during the summer months, and in that way increase the number of students we can accommodate.

During the past two years, several books have been published by members of our faculty. The following is a list of the recent publications:

"Physical Diagnosis," by R. H. Major.

"Workbook in Elementary Diagnosis," by Logan Clendenen.

"Horse and Buggy Doctor," by A. E. Hertzler.

"Dispensary Urology," by N. F. Ockerblad.

"Your Child in Health and in Sickness," by Hugh Dwyer.

"The Human Fuel," by I. J. Wolf.

"Diseases of the Mouth and Jaw," by E. C. Padgett.

Three new mechanical devices have been invented by members of our faculty. The "iron lung" has been constructed; this is cheaper than the Drinker Respirator, and is just as efficient; it is now being built by the Columbian Tank Company. Dr. George Walker has had much to do with this construction, and will give information regarding it to any physician desiring the same. A new device for skin grafting has been developed by a member of the surgical department, and a member of the pathology department has invented the cathode ray machine which will be used extensively in cardiac diseases.

The hospital is badly in need of funds to provide a full-time department of Preventive Medicine and Hygiene, and also a Department of Psychiatry. These are the two badly needed departments of the medical school, and will be developed as soon as funds become available.

Complete information on the work and the service done in the various departments of the medical school can be obtained by examining the thirty-seventh biennial report of the Chancellor of the University of Kansas, for the two years ending June, 1938. Copies can be obtained by anyone who wishes them by communicating with the Chancellor.

The following information regarding the hospital work may be of interest to the medical profession:

There are four classes of patients in the hospital, private patients representing the smallest group, there being only

thirteen private rooms available. Only the private patients can be admitted here who are being cared for by one of the faculty members of the medical school of the University of Kansas. In addition to thirteen private rooms, we have seventeen semi-private rooms for a similar group of patients. All other patients are on wards, and pay no professional fee. These patients comprise either county patients or clinical patients. The clinical patient is the one who does not pay a professional fee, but has enough money to pay the hospital charges; he is sent to the hospital by his family doctor, or has been approved by the Social Service Department as being eligible to receive services without paying a professional fee. About thirty-five per cent of all patients in the hospital are sent in by the counties, and their eligibility is approved by the county authorities, not by the hospital. All other patients who do not pay a professional fee have their eligibility determined by our own Social Service Department. It is the general policy of the Social Service Department to accept letters from the doctors regarding patients' eligibility; the only time these are questioned is when patients ask for special services, and the Social Service Departments find out the patient can pay a private doctor, even though the family physician has approved clinical care. Of course, these cases are rare.

The hospital is usually crowded, and there are usually thirty to fifty patients on the waiting list. We do, however, keep a few beds available for acute emergencies. Approximately eighty-five per cent of the private patients come from the Missouri side, probably because a large percentage of the physicians on our staff come from the Missouri side. About twenty per cent of the patients in the Out-Patient Department come from Missouri, eighty per cent coming from Kansas. We take these Missouri patients in the Clinic usually because they are valuable teaching material.

Respectfully submitted,

H. R. Wahl, M.D., Dean of the  
University of Kansas School of Medicine.

The following is the report of the Committee on Maternal and Child Welfare:

#### TO: THE HOUSE OF DELEGATES

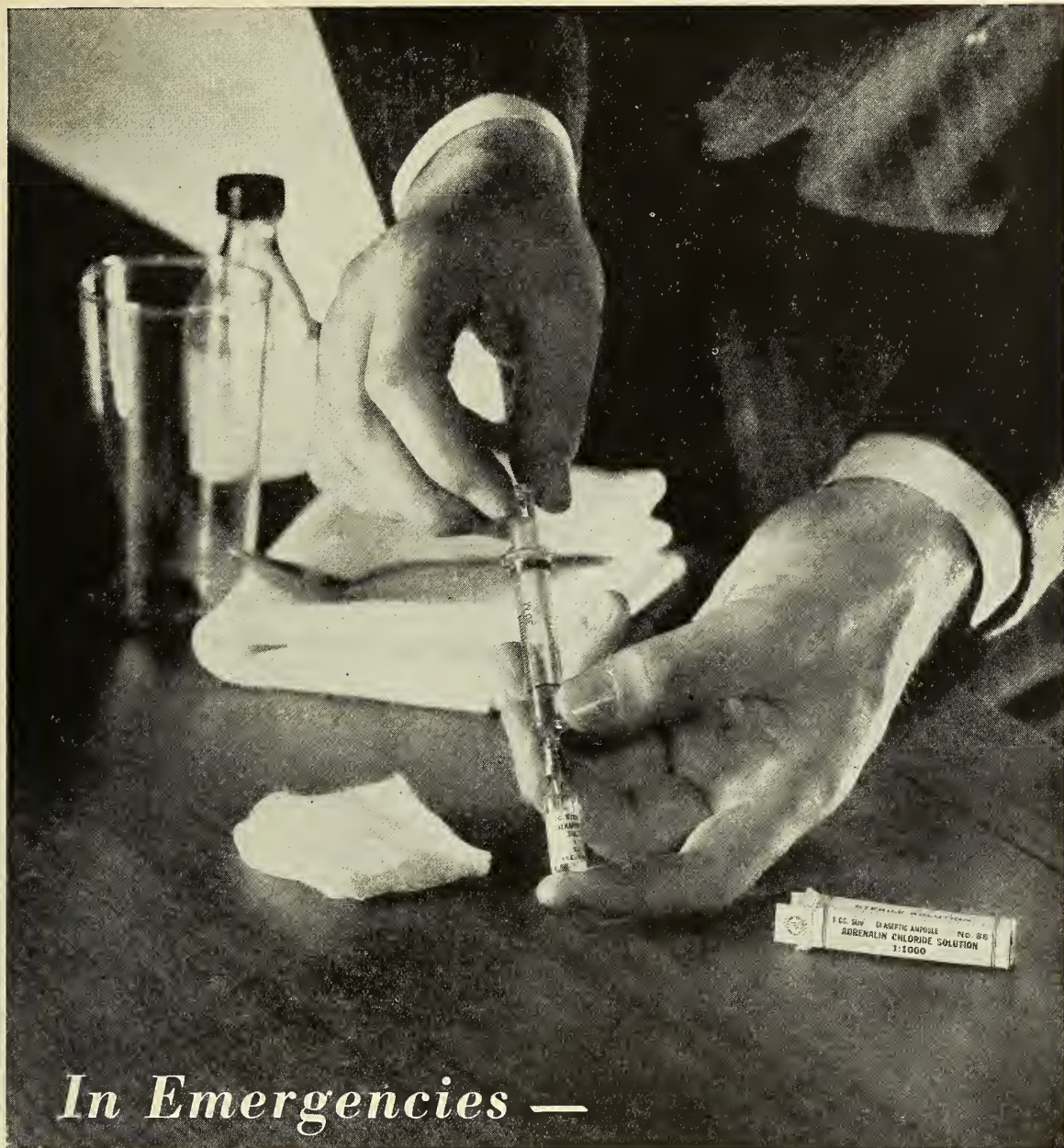
Prominent among the various activities has been collaboration with the Kansas State Board of Health in presenting the post-graduate courses in pediatrics and obstetrics. The committee planned three post-graduate courses for the fiscal year. These courses have shown a steady increase in attendance and interest.

Dr. H. R. Ross was placed in charge of an investigation with regard to the present status of smallpox and has conferred with the Attorney General on the possibility of requiring compulsory immunization prior to admission to public schools. Dr. Ross was also in charge of the preparation and presentation to the Kansas State Board of Health, of a new form for reporting maternal and child mortality and morbidity statistics.

Among the major projects of the year was the preparation of a pamphlet for the physicians of Kansas on obstetrics and pediatrics. The pamphlet to contain articles by Kansas physicians; outlining the minimum standards of care in pediatrics and obstetrics. This work is being carried out under the chairmanship of Dr. Porter Brown, Dr. Howard Clark, Dr. B. I. Krehbiel, and Dr. C. O. Meredith. It is hoped that these articles can be published in the Journal of The Kansas Medical Society and later made up into pamphlet form.

Another important project carried out by the committee was the introduction of a set of standardized rules and regu-





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lations for obstetric care in all hospitals throughout the state. These rules were compiled and sent to the presidents or secretaries of each county. It is hoped that these rules will be universally adopted.

Dr. Howard Clark has collaborated with Dr. Ross upon the question of placement of incubators in various hospitals throughout the state, through the cooperation of the Kansas State Board of Health.

Dr. Krehbiel was placed in charge of a project of developing a more efficient plan of county immunization programs.

The Maternal and Child Welfare Committee has also given assistance to the Membership Committee of the

American Congress on Obstetrics and Gynecology to be held in Cleveland, September 11-15.

Respectfully submitted,

Ray A. West, M.D., Chairman, Committee on Maternal and Child Welfare.

The following is the report of the Committee on Endowment:

#### TO: THE HOUSE OF DELEGATES

This committee held one meeting at the Jayhawk Hotel on April 5. There were present Dr. P. A. Pettit, Paola; Dr. J. L. Grove, Newton; and Dr. H. L. Chambers, Law-

#### TO: THE HOUSE OF DELEGATES

I wish to inform the Society that the following of

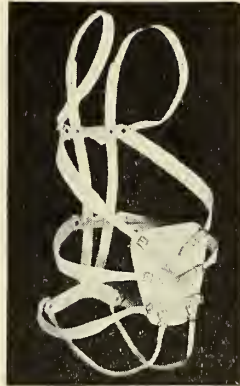
our members have died during the year on the dates and from the causes described:

NAME	AGE	DATE	PLACE	CAUSE OF DEATH
Parker, Lynn H.	51 years	Jan. 1	Parsons	Fractured skull in automobile accident
Hammer, John Elmer	49 years	Jan. 2	Wichita	Auricular and ventricular fibrillation
Kaiser, Charles H.	64 years	Jan. 2	Hillsboro	Coronary occlusion
Beatson, Lachlan M.	54 years	Jan. 2	Arkansas City	Angina pectoris
Horner, Thomas E.	62 years	Jan. 16	Atchison	Coronary thrombosis
Pine, Walter Fredrick	67 years	Jan. 24	Dodge City	Duodenal ulcer, pus appendix
Martin, Hugh Ralph	25 years	Jan. 30	Kansas City	Lobar pneumonia, abscess kidney
Smith, Wm. Albert	66 years	Jan. 31	Wichita	Cancer of head of pancreas
Ryan, Clarence James	55 years	Feb. 14	Severance	Coronary occlusion
McKinley, Charles	67 years	Feb. 15	Emporia	Cancer of stomach
Wortman, Melvin L.	76 years	Mch. 1	Winfield	Coronary occlusion and diabetes
Dary, Gilbert	79 years	Mch. 4	Hartford	Myocarditis and mitral regurgitation
Slosson, Emily Brooke	86 years	Mch. 15	Sabetha	Angina pectoris
Hall, John Crawford	76 years	Mch. 21	McPherson	Heart block
Stillwagon, William A.	62 years	Mch. 30	Oswatimie	Hypertensive cardio-vascular
Ward, Charles E.	72 years	Mch. 30	Little River	Lobar pneumonia
Vickers, John Landon	66 years	April 20	Wichita	Coronary thrombosis
Smith, Orilla Loraine	71 years	April 29	Wichita	Gastric carcinoma
Sitterman, Edward (H.)	54 years	May 8	Kansas City	Cerebral hemorrhage
McIrvin, Will C.	78 years	May 9	Atwood	Accidental asphyxiation from carbon monoxide gas
Seger, Jessie Ogden	76 years	May 24	Wichita	Arteriosclerotic heart disease
Adams, Harriet E.	71 years	June 15	Horton	Chronic nephritis
Hoover, Andrew J.	77 years	June 22	Wichita	Chronic myocarditis, cerebralsclerosis
Kreeger, George G.	65 years	July 11	Richmond	Coronary sclerosis
Sutcliffe, John S.	76 years	July 19	El Dorado	Chronic myocarditis, thrombosis coronary
Helton, James W.	70 years	July 25	Colony	Chronic myocarditis
Mayer, Henry Conrad	74 years	Aug. 4	Junction City	Arteriosclerosis
Cummings, James S.	87 years	Aug. 26	Bronson	Acute ilio colitis, chronic myocarditis
Venard, Thomas	62 years	Aug. 29	Ness City	Diabetes mellitus
Everett, Addis	59 years	Sept. 7	Kansas City	Carcinoma of stomach
Wear, Robert C.	80 years	Sept. 8	Baxter Springs	Uremia, prostatitis
Hatcher, Charles D.	80 years	Sept. 15	Emporia	Diabetes mellitus
Wehe, Wm. Adam	69 years	Oct. 1	Topeka	Cancer of rectum
Griffin, L. W.	77 years	Oct. 2	Fort Scott	Coronary rupture
Tufts, Edwin A.	57 years	Oct. 4	Arkansas City	Pulmonary tuberculosis
Saylor, John H.	72 years	Oct. 17	Topeka	Mesenteric thrombosis
Callender, Charles	76 years	Nov. 2	Anthony	Chronic myocarditis
Youngs, William L.	66 years	Nov. 7	Independence	Diabetes mellitus
Winterbotham, J. H.	65 years	Nov. 20	Salina	Angina pectoris
Hill, Ray G.	79 years	Nov. 25	Wamego	Chronic myocarditis
Whitney, Perry N.	81 years	Dec. 7	Arkansas City	Cerebral hemorrhage
Trekell, Emery	61 years	Dec. 8	Wellington	Apoplexy, peptic ulcer
Kaster, John P.	81 years	Dec. 13	Wichita	Chronic myocarditis
Hobson, Mark F.	85 years	Dec. 16	Wichita	Influenza, broncho pneumonia
McCrea, Maggie	74 years	Dec. 19	Sterling	Cancer of stomach
Hall, Marvin	45 years	Dec. 21	Topeka	Lymphatic leukemia
Hinshaw, Theophilus	80 years	Dec. 23	Winfield	Diabetes mellitus
Wedel, Alpha J.	56 years	Dec. 25	Newton	Lobar pneumonia, cerebral hemorrhage
Davis, John T.	85 years	Dec. 26	Liberty	Chronic myocarditis



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H. W. Allen, Wichita, Kansas

John W. Lloyd, Fredonia, Kansas  
Dorman D. Drake, Salina, Kansas

John A. Foltz, Salina, Kansas

\* \* \* \* \*

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rence. Dean Olin Templin, Secretary of the Kansas University Endowment Association, who expected to attend was ill, and could not be present but sent a report.

(1) Following considerable general discussion of historic matters in Kansas medicine (financially studied), the present conditions and the outlook for the future, we concluded that this committee should have a more solid and permanent form. We recommend three members serving three years each, one to be appointed (or reappointed) each year.

(2) Dean Templin reported (by letter) that his association is administering a fund of \$70,000 for a research laboratory building and equipment, a \$60,000 fund for the addition of a children's ward, a scholarship fund of \$15,210 managed as a loan fund to worthy and needy medical students (28 loans this year), a fund of \$7,605 used in research on treatment of mental and nervous diseases of women, a \$1,000 fund whose income is for medical research, an annual fund of \$1,500 for a research fellowship in medicine, a fund of \$2,000 for a clinical study and evaluation of a certain medicine for certain patients, and \$5,000 whose income goes as a gift scholarship to a male student of a certain high school who will specialize in law or medicine in the University of Kansas.

(3) We are strongly advocating the endowing of research and the establishing of fellowships. We are less enthusiastic about loaning to students.

(4) We believe the development of lectureships for both professional and lay audiences on medical and related subjects is worthy and worth while.

(5) We urge our members to solicit donations, and/or bequests as occasions present. Any prospect that may be contacted should be carefully followed up. Dean Templin will always aid with literature and written or printed suggestions when consulted and will go or send a representative to help you with any prospect that seems to warrant it.

Respectfully submitted,

H. L. Chambers, Chairman of the Committee on Endowment.

The following is the report of the Committee on Medical Economics:

#### TO: THE HOUSE OF DELEGATES

Medical care of the indigent sick continues to be a source of great concern. Fifty-one of our counties are operating under agreements or contracts with local boards of social welfare to care for the indigent sick either on a fee schedule or lump sum payment plan. Both plans have advantages and disadvantages. Either plan is workable if it can be financed. Relief loads are not diminishing. Indigent sickness is not decreasing. The question arises as to how long any plan for such care can be financed. Excellent cooperation with both state and local welfare boards has greatly facilitated the work of caring for the indigent sick during the past year.

A new Kansas State Board of Social Welfare is to be appointed by the Governor. The board will consist of three full-time members. At this time we do not know what the attitude of the new board will be relative to indigent care. Contact will be maintained and their interest in the indigent problem solicited.

Your committee has been advised regarding the recommendation of the national health program. One program is before congress at present. It is very doubtful if the provisions of the plan can be carried out—the expense is prohibitive.

Group hospitalization has received especial attention dur-

ing the past year. A sub-committee was appointed to determine the feasibility of the proposed program; to make a survey of the demand for same and to report their findings and recommendations. This was done at a joint meeting of this committee and the Kansas State Hospital Association held in Topeka, January 29, 1939. It was agreed that the requirements adopted by the American Hospital Association be followed and that physicians services be not included.

The survey requested by the American Medical Association is moving very slowly. A few of the studies have been returned to the Executive Secretary's office. No summary of finding has been made.

Attention has been given to the plan of the Farm Security Administration for financing low-income groups unable to provide medical attention for themselves. A group of counties within the state have looked with favor upon this plan.

Much time has been given to cooperation with the Legislative Committee during the past year.

At a time when economic uncertainty is so prevalent in the land, the world over, in fact, it behooves us to move with caution.

Respectfully submitted,

F. L. Loveland, M.D., Chairman, Committee on Medical Economics.

The following is the report of the Committee on Venereal Disease:

#### TO: THE HOUSE OF DELEGATES

During the spring of 1938 a course of brief lectures on Venereal Disease was offered in each of the twelve Councilor Districts. This post-graduate course was sponsored by the Society's Committee on Venereal Disease, the state Society and the Kansas State Board of Health in cooperation with the U. S. Public Health Service.

In the fall of 1938 a brochure containing the material presented during the post-graduate course was published by the Kansas State Board of Health and a copy mailed to every physician in Kansas. The brochure brought forth much favorable comment. In many instances additional copies were requested and the general plan of the booklet was adopted by several other states.

Your committee is pleased to announce the opening of four additional venereal disease clinics located in Emporia, Salina, Leavenworth and Parsons. It is particularly significant that these four clinics have been established through the cooperation of the U. S. Public Health Service, the Kansas State Board of Health, the State Society and the local societies in the counties in which the clinics are located. In each and every instance the Kansas State Board of Health has not entered into any negotiations regarding these clinics until after a formal request has been received from the local medical societies, signifying their decision that a clinic is needed and desirable and have agreed to lend their support and endorsement to the project. This leaves the general conduct of the clinic and its policies entirely in the hands of the local medical society which is as it should be.

Your committee is furthermore proud to report that there has been a distinct increase in the number of venereal disease cases reported to the Kansas State Board of Health. We feel very properly that this is, in no small measure, due to the splendid cooperation we have received from the medical profession in the state. However, it must be recognized that the matter of reporting venereal disease cases, especially syphilis, is still capable of vast improvement and it is hoped that as time passes the reporting of these cases





**IN DEPRESSIVE STATES,** Benzedrine Sulfate Tablets will often produce a sense of increased energy, mental alertness and capacity for work, but should be used only under the strict supervision of a physician. In depressive psychopathic states, the patient should be institutionalized.

The following articles, selected from an extensive bibliography on the subject, discuss the administration of 'Benzedrine Sulfate Tablets' in depressive states:

#### BIBLIOGRAPHY

GUTTMANN, E.—The Effect of Benzedrine on Depressive States—*J. Ment. Sci.*, 82:618, September, 1936.

MYERSON, A.—Effect of Benzedrine Sulfate on Mood and Fatigue in Normal and in Neurotic Persons—*Arch. Neurol. & Psychiat.*, 36:816, October, 1936.

DAVIDOFF, E.—A Clinical Study of the Effect of Benzedrine Therapy on Self-Absorbed Patients—*Psychiatric Quart.*, 10:652, October, 1936.

WILBUR, D. L.; MACLEAN, A. R. and ALLEN, E. V.—Clinical Observations on the Effect of Benzedrine Sulphate—*Proc. Staff Meet. Mayo Clin.*, 12:97, February 17, 1937.

NATHANSON, M. H.—The Central Action of Beta-aminopropylbenzene (Benzedrine)—*J. A. M. A.*, 108:528, February 13, 1937.

DAVIDOFF, E. and REIFENSTEIN, E. C., JR.—The Stimulating Action of Benzedrine Sulfate—*J. A. M. A.*, 108:1770, May 22, 1937.

GUTTMANN, E. and SARGANT, W.—Observations on Benzedrine—*Brit. Med. J.*, 1:1013, May 15, 1937.

WOOLLEY, L. F.—The Clinical Effects of Benzedrine Sulphate in Mental Patients with Retarded Activity—*Psychiatric Quart.*, 12:66, January, 1938.

ANDERSON, E. W.—Further Observations on Benzedrine—*Brit. Med. J.*, 2:60, July 9, 1938.

BRINTON, D.—Nervous Diseases—Benzedrine Sulfate—*The Practitioner*, 139:385, October, 1937.

REPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY—The Present Status of Benzedrine Sulfate—*J. A. M. A.*, 109:2064, December 18, 1937.

REPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY (Announcement of Acceptance)—*J. A. M. A.*, 111:27, July 2, 1938.

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will become more and more routine on the part of every practicing physician in Kansas.

During this spring the second post-graduate course on syphilis and gonorrhea has been offered the medical profession, the speaker this year being Dr. J. V. Van Cleve of Wichita. We have received many extremely favorable reports regarding his lectures and it is hoped that a course of this kind can be offered annually.

Many important activities still await the committee's attention. One of these is vital enough to be herein mentioned. In many states new laws have been passed requiring prenatal and premarital Wassermann tests. The importance of a Wassermann on every mother during her early pregnancy and the tremendous advantage of a safeguard Wassermann in all persons contemplating marriage is above question. The definite increase in the number of volunteer Wassermans in these two types of individuals in Kansas reflects no little credit on our physicians and it is to be hoped that the practice will become so universal that no need for special legislation will be necessary in this state.

Respectfully submitted,

A. D. Gray, M.D., Chairman, Committee on Venereal Disease.

The following is the report of the Committee on Automobile Accidents:

#### TO: THE HOUSE OF DELEGATES

This committee was appointed by Dr. Melencamp, last August, at the request of Mr. George A. Reid, Engineer of Safety and Traffic Control of the State Highway Commission of Kansas. Mr. Reid said, in part, in a letter of August 19, 1938, addressed to Mr. Clarence G. Munns:

"I want to thank you for your letter informing me that a committee has been appointed to work with this department in the matter of prompt reporting of accidents, especially those in which someone is injured or killed, paying particular attention to drunken drivers."

The chairman of the committee had two meetings with Mr. Reid in his office, at which time Mr. Reid discussed in some detail his ideas of the way in which the committee might help him in his work. The committee made several investigations along these suggested lines.

Before any detailed report could be made, however, the position of Engineer of Safety and Traffic Control was abolished. Its functions were transferred to Col. H. P. Jenkins, at the head of the State Highway Patrol.

An interview has been held with Colonel Jenkins and after investigation he has stated that he will welcome an opportunity to cooperate with this committee. It is therefore our hope that next year's committee will attempt to continue and further the many interesting possibilities, incidental to this subject.

The committee investigated laboratory tests for alcoholic concentration in the body, and several compilations of safety procedure and methods used in surrounding states.

Respectfully submitted,

A. K. Owen, M.D., Chairman, Committee on Automobile Accidents.

Adjournment followed.

The House of Delegates met in regular session at 8:30 a.m. on May 4, 1939, at the Hotel Jayhawk in Topeka. Dr. N. E. Melencamp, President, served as the presiding officer.

The first order of business was the roll call of Delegates, Officers, and Councilors.

The next order of business was the report of the Reference Committee on Constitution and By-Laws which was presented by Dr. A. W. Fegly, Chairman. The members of the House of Delegates voted to adopt the following amendments to the Constitution and By-Laws of the Society:

#### TO: THE HOUSE OF DELEGATES

Your committee recommends consideration and vote on the following amendments to the Constitution and By-Laws of the Society, which were presented at the last meeting of the 1938 House of Delegates. Because of the importance of each, we ask careful consideration and separate vote on each:

1. An Amendment to the Constitution, Article VI, Section 1, to provide for the addition of the immediate past president to the list of ex-officio members of the Council, making the paragraph read as follows:

"Constitution—Article VI, Council, Section 1.

The Council shall consist of one Councilor from each Councilor District, and in addition the President, President-Elect, immediate Past President, Secretary, and the Treasurer, as ex-officio members."

2. An amendment to the By-Laws, Chapter XI, Committees, Section 10, providing for the addition of the Immediate Past President to the Executive Committee of the Council, making the section read as follows:

"By-Laws—Article XI, Section 10. The Executive Committee of the Council shall be composed of the President, the President-Elect, the Immediate Past President, the Secretary and the Treasurer. This committee shall meet at the call of the President, and shall have authority to act in the interim between meetings of the Council upon all matters which would ordinarily require approval by the Council, which do not necessitate a special meeting of the Council, and which have not been delegated elsewhere by these By-Laws."

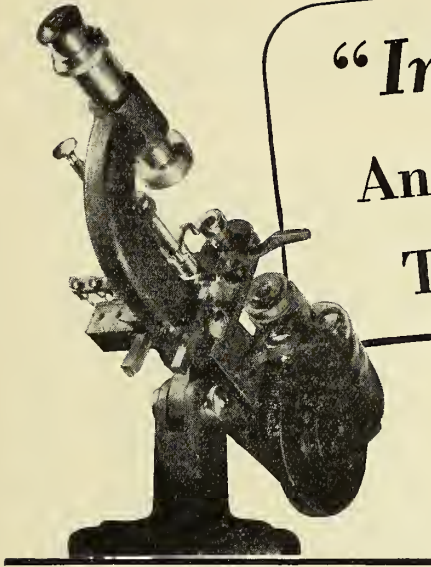
3. An amendment to the By-Laws Chapter IV, General Meetings, as a second paragraph and forming a part of Section 1 to read as follows:

"A Section on Ophthalmology, and Oto-Rhinology shall be recognized as an official Section of this Society. Any member of this Society, who practices ophthalmology, laryngology, otology, or rhinology shall be entitled to register as a member of this Section and to attend its meetings. As provided in paragraph 1 of this section of Chapter IV, it shall be permitted to select and elect its own officers, for a term of one year each. It shall be permitted to prepare a suitable program for its annual sessions subject to the approval of the Committee on Scientific Work, which shall be sent to the Committee on Scientific Work prior to March 15 of each year, for inclusion in the Annual Session program. The papers, records and proceedings of this Section shall become the property of this Society and shall be filed in the central office of this Society. Intermediate meetings of the Section may be held as desired, subject to permission of the Council or of the Executive Committee.

4. An amendment to the By-Laws Chapter V, House of Delegates, Section 3.

"Section 3, Chapter V, House of Delegates shall be amended by the addition of the following paragraph which shall become a part of Section 3.





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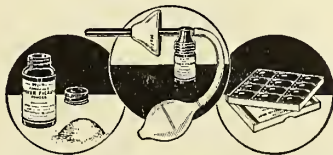


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"Each organized specialty section recognized by the House of Delegates as a component subdivision of the Annual Session of this Society shall be entitled to One (1) delegate to be chosen by said specialty section and certified to the Committee on Credentials before the opening of the House of Delegates at each annual session."

5. An amendment to Chapter V, House of Delegates, Section 16 is recommended as follows:

Chapter V—House of Delegates—Section 16, shall be amended as follows:

"Representatives to the House of Delegates of the American Medical Association shall be certified to each annual meeting of that body according to the Constitution and By-Laws of that association and shall be selected in the following manner: Delegates-Elect permitted this Society, whose two-year term of office as Delegates shall begin with the annual session of the A.M.A. of the year succeeding their election shall be elected annually."

6. An amendment to the By-Laws, Chapter XI, Committees, Section 1, by addition of the following committees to the present list of standing committees:

"Committee on Tuberculosis; Committee on Venereal Disease; Committee on Conservation of Eyesight; Committee on Allied Groups to Medical Practice (the latter to include such groups as Laboratory Technicians, X-Ray Technicians, Pharmacy, Dentistry, and other allied organizations or groups); Committee on Constitution and Rules."

7. An amendment to Chapter XI, Committees, by the addition of the following sections:

"Section 21. The Committee on Control of Tuberculosis shall consist of at least five (5) members. It shall be the duty of this committee to conduct all possible research on the subject of Tuberculosis control, and to disseminate information on this subject to the component organizations of this Society, to the medical profession in general, and to the public. It shall also cooperate with other official organizations of similar aim and purposes, not a part of this Society, in promoting prevention, early diagnosis and adequate treatment of this disease. In cooperative work with other organizations, this committee should endeavor to take the initiative in molding and directing the policies and activities in this work. A portion of its members, one of whom is the retiring Chairman, shall have served on the retiring committee."

"Section 22. The Committee on Venereal Disease shall consist of at least five (5) members. It shall be the duty of this committee to conduct all possible research on the subject of the specific venereal diseases, and to disseminate information on this subject to the component organizations of this Society, to the medical profession in general, and to the public. It shall also cooperate with other official organizations of similar aim and purposes, not a part of this Society, in promoting prevention, early diagnosis and adequate treatment of these diseases. In cooperative work with other organizations this committee shall endeavor to mold and direct the policies and activities of this work. A portion of its members, one of whom is the retiring chairman shall have served on the retiring committee."

"Section 23. The Committee on Conservation of Eyesight shall be composed of at least five (5) members. It shall be the duty of this committee to conduct

all possible research on conditions affecting eyesight, and to disseminate information on this subject to the component organizations of this Society, to the medical profession generally, and to the public. It shall also cooperate with other organizations of similar aim and purposes, not a part of this Society, in promoting prevention, early diagnosis and treatment of all conditions affecting eyesight. In cooperative work with other organizations this committee should endeavor to take the initiative in molding and directing the policies and activities in this work. A portion of its members, one of whom is the retiring chairman shall have served on the retiring committee."

"Section 24. The Committee on Allied Groups to Medical Practice shall consist of at least seven (7) members. It shall be the duty of this committee to conduct all possible research on correlating the work of allied professions and associations as related to Public Health and Medical Practice. In cooperation with the several professions and/or associations it shall be the aim of this committee to mold policies and activities for the improvement and betterment of medical service to the public. Special sub-committees may be formed from the general committee to specifically take up and study matters dealing with the individual group or organization. A portion of its members including the retiring chairman shall have served on the retiring committee."

"Section 25. The Committee on Constitution and Rules shall consist of five or more members. It shall be the duty of this committee to make study of Constitution and Rules, and from time to time make such recommendations for changes, deletions, modifications, and interpretations as may arise from time to time in order to further the work of this organization."

Respectfully submitted,

A. W. Fegty, M.D., Chairman,  
Committee on Constitution and Rules,  
appointed on May 10, 1938, and re-  
appointed May 2, 1939.

Following this the annual election of officers and councilors was held. The following officers and councilors were elected: Dr. F. L. Loveland, President-Elect; Dr. C. D. Blake, First Vice-President; Dr. Henry N. Tihen, Second Vice-President; Dr. John M. Porter, Secretary; Dr. Geo. M. Gray, Treasurer; Dr. J. W. Randell, Councilor for the First District; Dr. O. W. Davidson, Councilor for the Second District; Dr. F. R. Croson, re-elected Councilor for the Seventh District; Dr. L. S. Nelson, re-elected Councilor for the Eighth District; Dr. G. W. Hammel, Councilor for the Ninth District.

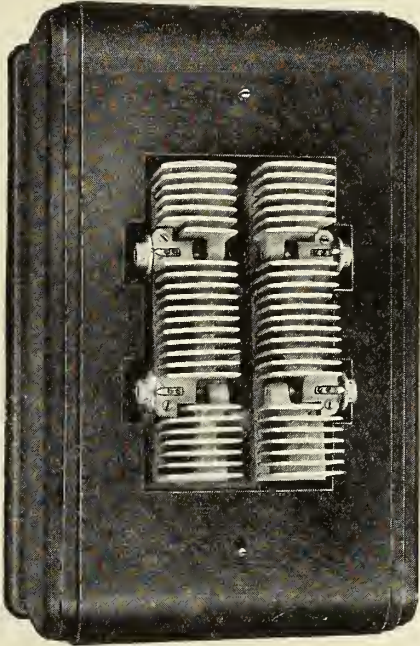
Dr. J. F. Hassig was elected as a delegate to the House of Delegates of the American Medical Association for the 1939 and 1940 meetings of that body. Dr. H. L. Snyder was elected Delegate-Elect to attend the 1940 and 1941 meetings of the American Medical Association House of Delegates.

Upon a motion adopted it was agreed that the Society should defray the necessary and actual expenses of President, two delegates, and the Executive Secretary to the 1939 meeting of the American Medical Association House of Delegates.



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Upon a motion adopted it was agreed that the House of Delegates go on record as protesting the Wagner Act in Congress and any other legislation pernicious to public health and medicine and that the Committee on Medical Economics prepare that protest, and that the protest be sent by the Society to each Congressman and Representative.

It was suggested that the delegates take up with the trustees of the American Medical Association the matter of employing a Washington representative.

Upon motion made and seconded and carried unanimously the House of Delegates extended a vote of thanks for the hospitality and the splendid meeting arranged by the Shawnee County Medical Society for the Eightieth Annual Session.

Upon a motion made and carried, it was agreed that the Council be authorized to levy any special assessment necessary for the year 1940-1941.

Upon a motion made and carried, the Constitution and By-Laws of the Society were amended to affix the annual dues at \$15.00 per member per year. (By reason of the constitutional necessity for this amendment to be approved by the 1940 House of Delegates, this provision could not become effective before January 1, 1941.)

The new officers for 1939-1940 were then installed and upon motion made and carried, appreciation was expressed to Dr. N. E. Melencamp for his successful and efficient presidency.

Adjournment followed.

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### COUNCIL MEETING

A meeting of the Council was held at the Hotel Jayhawk in Topeka on May 4, 1939.

Members present were: Dr. C. C. Nesselrode; Dr. N. E. Melencamp; Dr. G. O. Speirs; Dr. John M. Porter; Dr. W. P. Callahan; Dr. C. D. Blake; Dr. Geo. M. Gray; Dr. F. L. Loveland; Dr. J. W. Randell; Dr. O. W. Davidson; Dr. M. Trueheart; Dr. J. L. Lattimore; Dr. G. W. Hammel; Dr. A. C. Armitage; Dr. L. S. Nelson; Dr. F. R. Croson. Guests present were Dr. J. F. Gsell, Dr. J. F. Hassig, and Dr. H. L. Snyder. Mr. John F. Austin, executive secretary of the Sedgwick County Medical Society, and Clarence G. Munns, Executive Secretary, were also present.

The first order of business was the election of one member to the Defense Board for a term of three years. Upon a motion made and carried, Dr. L. S. Nelson, Salina, was re-elected as a member and as Chairman of the Defense Board.

The next order of business was the election of two

members for terms of three years each to the Editorial Board. Upon a motion made and carried, Dr. W. M. Mills and Dr. Lucien Pyle, both of Topeka, were re-elected for these positions and Dr. Mills was re-elected as Chairman of the Editorial Board and as Editor of the Journal.

Upon a motion made and carried, it was agreed that the invitation of Sedgwick County Medical Society be accepted to hold the Eighty-first Annual Session of the Society in Wichita.

Upon a motion made and carried, Sedgwick County Medical Society was authorized to select a date in May, 1940, for the Eighty-first Annual Session.

Upon a motion adopted the Executive Secretary was instructed to remove the names of all unpaid members from the official mailing lists of the Society effective June 1, 1939.

Upon a motion made and carried, Dr. Nesselrode was requested to write a letter to the officers of the Kansas Women's Field Army expressing approval of its assistance in the Cancer problem; assuring the cooperation of the Society; and outlining several suggested plans for further assistance from the Society.

Discussion followed concerning Farm Security Administration plans and a motion was adopted authorizing any Councilor Districts which desires to do so, to conduct experiments of this kind. The central office was asked to prepare a survey of contracts issued for this purpose and of the operation of these plans.

Upon a motion made and carried, Miss Joyce Ryerson's salary was increased \$120.00 and Clarence Munns salary was increased \$1,200.00 for the year 1939-1940.

Adjournment followed.

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## NEWS NOTES

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### NARCOTICS

The Kansas State Osteopathic Association filed suit on May 5 against Mr. William H. Burke, Collector of Internal Revenue, Wichita, in an attempt to obtain narcotic permits for Kansas osteopaths for the period from July 1, 1939, to June 30, 1940.

The suit which is a request for a temporary injunction and a permanent injunction was filed in Federal District Court. It is expected that a hearing thereon will be held during the latter part of May or the early part of June.

Several excerpts from the osteopathic petition are as follows:



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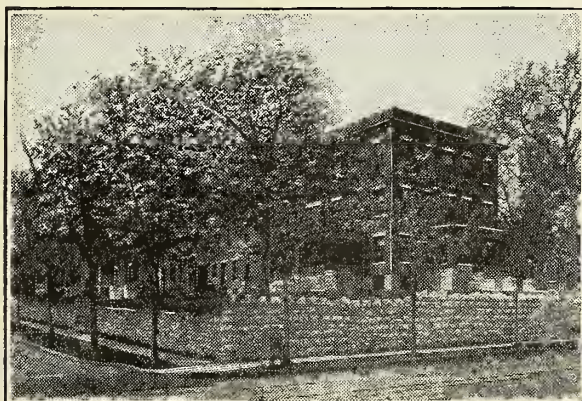
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Beautifully situated in a pleasant residence section of the city. Fully equipped and well heated. All pleasant outside rooms. Large lawn and open and closed porches for exercise. Experienced and humane attendants. Liberal, nourishing diet. Resident physician in attendance day and night.

"That the licenses issued by the United States Government through the Collector of Internal Revenue to physicians and surgeons whereby they may obtain and use narcotic drugs, is renewable annually upon the payment of a fee and that each such license expires on June 30th of each year. Many of the osteopathic physicians are now being denied a license and the licenses now held will expire on June 30th, of this year and they will not be permitted to obtain, prescribe or use narcotic drugs in the practice of their profession unless the said licenses are granted, renewed or re-issued by the said William H. Burke as Collector of Internal Revenue for the State of Kansas. That these plaintiffs and the members of said Association have been informed by the said William H. Burke as Collector of Internal Revenue, that he will continue to refuse to issue or re-issue or renew the narcotic licenses of osteopathic physicians in the State of Kansas unless enjoined from so refusing by this court, giving as his reason that the laws of the State of Kansas do not qualify one licensed as an osteopathic physician and surgeon under the laws of the said state to use narcotic drugs."

"Plaintiffs further state that said reason given is contrary to all of the opinions of the Attorney General of the State of Kansas except the opinion of one assistant, and is contrary to all laws of the State of Kansas and of the decisions of the Supreme Court of Kansas interpreting said laws of the State of Kansas, under which plaintiffs are entitled to practice their professions; that plaintiffs are licensed to and as a part of their practice as osteopathic physicians do care for obstetrical and other cases in which excruciating pain must be relieved before proper manipulation can be given and proper adjustment or reductions made, and that in said cases and in otherwise carrying on the practice of their profession, it is absolutely necessary that plaintiffs administer and prescribe narcotic drugs as an anesthetic and to relieve pain and that if plaintiff's registration and right to procure such drugs is refused as aforesaid, both they and the general public will suffer irreparable injury and loss and will be unable to carry on the practice of their profession as osteopathic physicians and surgeons."

### ATTORNEY

The Kansas Board of Medical Registration and Examination announced on April 15 that Mr. Theo. F. Varner, former Assistant Attorney General of the State of Kansas, has been retained as legal counsel for the Board.

Mr. Varner will continue his practice in Independence and will assist the Board in a part-time capacity.

### MEETING

One hundred and thirty-five members from various parts of the state met in Pratt on April 21 to attend a meeting of the Pratt County Medical Society, at which Clarence Munns was guest of honor. Guest speakers were Dr. J. L. Lattimore and Dr. F. L. Loveland, both of Topeka. Clarence Munns was presented with a chest of sterling silver consisting of a complete service of eight, which gift was purchased through individual contributions obtained by Pratt County Medical Society from the physicians of western Kansas. Dr. Herbert Atkins acted as toastmaster, Dr. N. E.

Melencamp presented the gift, and the committee which selected and purchased the gift consisted of Dr. L. R. McGill, Hoisington, Dr. L. F. Schuhmacher, Meade, and Dr. Athol Cochran, Pratt.

### PRIZE LIST

The following is a list of the prizes and awards made following the annual golf tournament and trap shoot held in conjunction with the 80th Annual Session:

#### GOLF PRIZES

- Dr. R. P. Knight, Topeka—Mead Johnson Trophy.
- Dr. B. J. Ashley, Topeka—Quinton-Duffens Trophy.
- Dr. E. H. Decker, Topeka—Ray Beers prize.
- Dr. J. L. Lattimore, Topeka—Wm. D. Merrill Company.
- Dr. John Shaw, Wichita—Bush Coat, Insured Investors, Inc.
- Dr. L. L. Saylor, Topeka—Golf shoes, Palace Clothing Co.
- Dr. E. C. Rainey, Wichita—Bag, Bob Forney.
- Dr. C. B. Trees, Topeka—Clock, Lattimore Laboratories.
- Dr. E. G. Padfield, Salina—Golf shirt, Griggs-White Clo. Co.
- Dr. H. P. Jones, Lawrence—Lamp, The W. E. Isle Company.
- Dr. L. S. Nelson, Salina—Fitted case, Stan Meyers Professional Pharmacy.
- Dr. W. K. Hobart, Topeka—Hypodermic set, Sharp & Dohme.
- Dr. Henry Benning, Waverly—Sun goggles, Riggs Optical Company.
- Dr. C. J. Mullen, Kansas City—Traveling kit, Drisko-Hale Drug Store.
- Dr. F. R. Johnson, Topeka—12 golf balls, Ripley Laundry.
- Dr. J. A. McLaughlin, Greensburg—12 golf balls, Updegraff-Buick Company.
- Dr. H. L. Snyder, Winfield—Pipe, Webb Woodward Insurance.
- Dr. E. S. Edgerton, Wichita—Ash Tray, Wolf's Jewelry.
- Dr. H. E. Snyder, Winfield—\$5.00 Credit, Rahn's Shirt Factory.
- Dr. Orville Clark, Topeka—Sun glasses, American Optical Company.
- Dr. R. A. West, Wichita—3 golf balls, Ripley Laundry.
- Dr. S. D. E. Woods, Osawatomie—3 golf balls, Ripley Laundry.
- Dr. L. R. Pyle, Topeka—Luzier's, Inc., prize.
- Dr. B. I. Krehbiel, Topeka—Sterilizer, Stansfield Drug Co.
- Dr. L. C. Murray, El Dorado—Surgical Apron, Holland-Rantos Co.
- Dr. Paul Trimble, Emporia—Luzier's Inc., prize.
- Dr. Cecil Snyder, Winfield—Lighter, C. V. Mosby Company.
- Dr. H. T. Morris, Topeka—Prize.
- Dr. G. R. Hastings, Lakin—Gas Service Company prize.
- Dr. E. A. DeVilbiss, Kansas City—Medicine kit, The Upjohn Company.
- Dr. J. M. Marks, Valley Falls—Flashlight, Skelly Oil Company.
- Dr. Harry Davis, Topeka—Book of Health, E. R. Squibb & Company.
- Dr. R. H. Munford, Belleville—John Wyeth Bros., prize.
- Dr. J. A. Dillon, Larned—Nestle's Milk Products prize.
- Dr. C. M. Fitzpatrick, Salina—Horlicks Malted Milk Company prize.



# SUPPORTS FOR THE LOWER BACK

In writing of low back pain from a surgical standpoint, a leading orthopedist\* in a recent article comments thus:—"Practically all patients who come to the clinic with this symptom receive a course of therapy consisting of massage, heat, exercises for the correction of posture and for the reconditioning of stiff, painful muscles, and support in the form of belts, corsets, or braces. The large majority are relieved by these measures. Only those who are not cured or improved, who have persistent or recurring pain, and in whom there is some definite defect or disorder in the structure of the lumbosacral region of the spine are advised to have an operation."

• • •

The Camp lumbosacral belt for men illustrated herewith is made of firm canvas. The closed back is well boned. There are two adjustment straps at the sides; the lower one providing adequate sacro-iliac support, while the upper strap, coming diagonally down the front, hugs the belt close to the lumbar vertebrae, thus affording them efficient support; the belt comes equipped with perineal straps. Models in this series provide for all types of build.



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\* SURGERY,  
Vol. 4, July, 1938

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Dr. B. P. Meeker, Wichita—4 dinners, Chocolate Shop.  
 Dr. Otto Prohuska—Gutting Motor Company prize.  
 Dr. E. M. Sutton, Salina—2 golf balls, Warren M. Crosby Company.  
 Dr. J. J. Hovorka, Emporia—2 golf balls, Hussey Insurance Company.  
 Dr. F. C. Boggs, Topeka—1 golf ball, Hussey Insurance Company.

#### TRAPSHOOT PRIZES

Dr. Ned Cheney, Salina—Mead Johnson Trophy.  
 Dr. A. J. Anderson, Lawrence—Clock, C. B. Fleet Company.  
 Dr. W. A. Smiley, Junction City—Bush Coat, Insured Investors, Inc.  
 Dr. W. W. Reed, Topeka—Medicine Bag, M. & R. Dietetic Labs.  
 Dr. W. M. Mills, Topeka—\$10.00 credit, C. V. Mosby Company.  
 Dr. G. B. Kierulff, Melvern—Fitted case, Gem Drug Company.  
 Dr. Walter Weidling, Topeka—Ham, Kaw Packing Company.  
 Dr. H. E. Haskins, Kingman—Lawn Chair, Anton Awning Company.  
 Dr. Ed Smiley, Junction City—Sweater, Pelletier's Store.  
 Dr. C. F. Taylor, Norton—Lamp, A. S. Aloe Company.  
 Dr. R. R. Sheldon, Salina—Lamp, Kansas Power and Light Co.  
 Dr. G. B. Morrison, Wichita—Sun Glasses, American Optical Company.  
 Dr. H. C. Clark, Wichita—Cocktail set, McFarland Drug Company.  
 Dr. H. P. Jones, Lawrence—Broiler, Gas Service Company.  
 Dr. F. C. Taggart, Topeka—Fitted kit, Dibble Pharmacy.  
 Dr. H. L. Chambers, Lawrence—Flashlight, Skelly Oil Company.  
 Dr. Murray Eddy, Hays—Match Set, Coca-Cola Company.  
 Dr. E. L. Vermillion, Salina—Malted Milk Tablets, Horlick's Malted Milk.  
 Dr. F. L. Loveland, Topeka—Ham, Morrell & Company.

#### COUNTY SOCIETIES

The Butler-Greenwood County Medical Society met at Arkansas City on April 20. Dr. Cecil Snyder, Winfield, and Dr. C. C. Hawke, Winfield, were the principal speakers at the meeting.

Dr. Lee Leger, Kansas City, spoke on "Sulfapyridine in the Treatment of Pneumonia" at the regular meeting of the Ford County Medical Society held in Dodge City on April 14.

Members of the Golden Belt Medical Society held their fiftieth annual meeting in Junction City on April 13. The following officers were elected to serve during 1939-40: Dr. Ralph G. Ball, Manhattan, president; Dr. R. M. Carr, Junction City, vice president; and Dr. L. E. Eckles, Topeka, secretary-treasurer. Approximately 175 physicians attended the meeting. Dr. John M. Porter, Concordia, gave a talk on "A Kansas Society Fifty Years Old," and Dr. A. E. O'Donnell, Junction City, Dr. J. A. Bargin, Rochester, Minnesota, and Dr. Thomas G. Orr, Kansas City, gave scientific papers.

Dr. B. L. Elliott and Dr. Marvin Bills, both of Kansas

City, were the principal speakers on the program at the Labette County Medical Society held in Parsons on April 26.

At a meeting of the Lincoln County Medical Society in Lincoln on April 9, the following officers were elected to serve during 1939: Dr. B. A. Higgins, Sylvan Grove, president; Dr. W. G. Emery, Barnard, secretary-treasurer.

Approximately thirty physicians attended the meeting of the Lyon County Medical Society in Emporia on April 4. Dr. J. J. Hovorka, Emporia, spoke on "Solid Ovarian Tumors" and Dr. C. W. Lawrence, Emporia, spoke on "Exomphalos and Errythemia."

The Reno County Medical Society held a meeting in Hutchinson on April 24 with Father Schwitalla, Dean of the St. Louis University School of Medicine, as the guest speaker.

Dr. E. R. Beiderwell, Belleville, was elected president of the Republic County Medical Society at a meeting on April 20. Other officers elected to serve are as follows: Dr. M. D. McComas, Courtland, vice president; Dr. H. D. Thomas, Belleville, secretary.

Members of the Shawnee County Medical Society met for a dinner-meeting in Topeka on April 10. Dr. A. N. Arneson, St. Louis, Missouri, spoke on "Treatment of Cancer of the Body of the Uterus."

The Washington County Medical Society met on April 11 in Washington for a joint banquet with the Washington County Dental Society. Dr. John Porter, Concordia, was the guest speaker on the scientific program.

Dr. M. Delp and Dr. T. J. Sims, both of Kansas City, presented the scientific program for the Wyandotte County Medical Society meeting in Kansas on April 18. Dr. Delp spoke on "Medical Treatment of the Common Cold," and Dr. Sims spoke on "New Born Infants, at Birth and the Ensuing Two Weeks."

#### MEMBERS

Dr. T. P. Haslam, Council Grove, has gone to Peter Bent Brigham Hospital in Boston for postgraduate study.

Dr. Charles H. Johnson, formerly of Kansas City, has moved to Stafford where he will be associated with Dr. W. L. Butler.

Dr. David T. Loy, formerly of Manhattan, has opened an office in Great Bend where he will specialize in eye, ear, nose and throat.

Dr. L. A. Proctor, Parsons, has gone to New Orleans for a six-weeks postgraduate course at the Louisiana State University.

Dr. W. P. Stoltenberg, Kinsley, has been re-elected as county health officer for Edwards County.

Dr. Winifred V. Wooster, formerly of Topeka, has opened an office in Minneapolis.

#### DEATH NOTICES

Dr. Frederick Day Candler, 64 years of age, died in Merriam on April 27. Dr. Candler formerly practiced in Bonner Springs. He received his medical degree from the Medico-Chirurgical College of Kansas in 1913 and prac-



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Dextrose . . . .	16.0%
Sucrose . . . .	6.0%
Invert sugar . . .	4.0%
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2. Q. What are the properties of Karo?

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3. Q. What are the Karo equivalents?

A. 1 oz. vol. . . .	40 grams
	120 cal.
1 oz. wt. . . .	28 grams
	90 cal.
1 teaspoon . . .	15 cal.
1 tablespoon . .	60 cal.

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ticed in Bonner Springs, until he became ill. He was a member of the Wyandotte County Medical Society.

Dr. Charles Homer Ewing, 68 years of age, died at his home in Larned on May 4. Dr. Ewing was born at Beaver Falls, Pennsylvania, in 1872, and received his grade and high school education in southeast Kansas. He attended the University Medical College at Kansas City and was graduated in 1902. Dr. Ewing moved to Larned in 1903 and continued his practice until the time of his death. Dr. Ewing had served as state representative, as a member of the Kansas State Board of Health, as a member of the Kansas State Board of Medical Examination and Registration, and was a member of the Pawnee County Medical Society.

Dr. George H. Matchette, 85 years of age, died at his home in McPherson on April 30. Dr. Matchette was born at Anderson, Indiana, in 1854 and received his medical degree from the National University of Arts and Science, Medical Department, St. Louis, Missouri, in 1878. He moved to McPherson and continued his practice for 52 years until his retirement in April, 1939. He was an honorary member of the McPherson County Medical Society.

Dr. Frank E. O'Neil, 69 years of age, died at a hospital in Fort Scott on March 20. He was a resident of Prescott. Dr. O'Neil was born in 1869 and received his early education at Baker University, Baldwin, Kansas. He attended the University Medical College in Kansas City and was graduated from there in 1895. He moved to Prescott and continued his practice of medicine until the time of his death. He was a past president of the Linn County Medical Society.

Dr. John H. Rapp, 49 years of age, died in Wichita on February 18. Dr. Rapp was a former resident of Moline. He was graduated from the University of Colorado and had practiced in Moline for several years. He was a member of the Elk County Medical Society.

Dr. Clarence W. Winbigler, 87 years of age, died at the Hatcher Hospital in Wellington, on February 26. Dr. Winbigler was a former resident of Harper. He was born at Terre Haute, Indiana, in 1851, and received his early education from Monmouth College. He received his medical degree from the Bellevue Hospital Medical College, Bellvue, New York, in 1877. He settled in Harper in 1885 and continued his practice of medicine until the time of his death. He was an honorary member of the Harper County Medical Society.

## BOOK REVIEW

MACLEOD'S PHYSIOLOGY IN MODERN MEDICINE. Edited by Philip Bard. Eighth edition 1938. Published by C. V. Mosby Co., St. Louis. Eight collaborators. Price \$8.50.

Since the death of Dr. MacLeod, this well known text has been revised and the greater part entirely rewritten under the editorship of Dr. Bard, who frankly states that no attempt is made to supply merely "predigested knowledge suitable for immediate bedside application." It is rather a volume of fundamental physiologic principles . . . that may stimulate the reader to engage in the weighing of evidence . . . in short, to do precisely what every student and practicing physician must do if he hopes to become even mildly competent in the practice of his chosen profession.

The section on "The Physicochemical Basis of Physiological Processes" has been omitted otherwise the previous order of arrangement has been retained.

This volume maintains its important position as the leading physiology text book, which should be the most frequently used reference book in the practicing physicians' library. D. C. W.

SYNOPSIS OF THE DIAGNOSIS OF THE ACUTE SURGICAL DISEASES OF THE ABDOMEN—John A. Hardy, M.D., Publishers, C. V. Mosby Company, St. Louis, Missouri. Price \$4.50.

In this little "synopsis" there is crammed into about 300 pages more information on diagnosis of surgical diseases of the abdomen than would be expected in a volume twice its size. It is concise, wastes no space or words, is "readable", and is arranged in a systematic orderly manner that makes the information contained readily accessible. In this little volume one can find more complete information on diagnosis than in some of our standard text-books of surgery.

It is true that the book embraces more than the field of "acute surgical diseases of the abdomen"—the author himself states in his preface . . . "It is not practical to adhere exclusively to the description of the so-called acute surgical diseases of the abdomen". Malignant lesions are discussed because " . . . if surgery is to be applied with any hope of benefit, these conditions must be suspected and studied earlier than is commonly done, and must be treated as surgical emergencies". Similarly, " . . . descriptions of the diagnosis of certain other conditions which ordinarily are not classed as acute surgical diseases of the abdomen; namely, chronic cholecystitis, duodenal ileus, splenic anemia, hemolytic jaundice, tuberculosis peritonitis, and stricture of the ureter are included for the following reasons: first, on account of the fact that the relief of these diseases, with the exception in some instances of tuberculosis peritonitis, is entirely surgical; second, because of the irre-intended, such as "coughs due to colds." Language descriptive of the symptoms of serious diseases should be avoided in recommending the use of cough or cold remedies.

3. Claims that a preparation will produce a definite result within a specified period of time should be avoided.

4. Medicinal rubbing preparations may assist in relieving local congestion and pain, and may relieve nasal congestion, but should not be represented as "penetrating" so as to relieve any organic or deepseated condition.

5. Cough syrups may give relief from certain symptoms of coughs due to colds, and cough drops may possess palliative value in the treatment of coughs, but they should not be represented as competent treatments for coughs, as such.—Better Business Bulletin, October 6, 1938.

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## AUXILIARY

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### PRESIDENT'S MESSAGE

Dear Auxiliary Members:

First I want to extend an invitation to all physician's wives to join the Auxiliary. If your county is organized, please attend the next meeting and tell your county president you want to be one of us, and if your county isn't organized, we want you and need you as a member. Come in as a member at large and send your dues of \$1.00 (which goes to the state) to our Treasurer, Mrs. Foster L. Dennis, 1505 Ave. A, Dodge City, Kansas.



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**E. F. DeVILBISS, M.D., SUPT.**

OFFICE, 1124 PROFESSIONAL BLDG., KANSAS CITY, MO.

I will tell you about my official visits to Fredonia, Parsons, Wichita, and Concordia in my next letter. Mrs. H. R. Bryan, our Corresponding Secretary, will accompany me.

The reports are coming in that we have a larger subscription for Hygeia this year and that all memberships in the counties are larger.

I attended the Cosmos Club in Russell, March 2, and visited Concordia, March 16, to hear Dr. C. C. Nesselrode talk on "Cancer Control." I am so happy the Medical Auxiliary is taking so much interest in helping to get this program before the public, and in teaching them to watch for all symptoms and not be afraid, for in the early stages of the disease, it can be cured.

Mrs. F. E. Coffey.

### LABETTE AND SHAWNEE COUNTIES PUT KANSAS ON THE MAP

For the second time Labette County has received honorable mention in the National Hygeia contest.

Labette County is third in a group of ten counties of the entire United States to receive honorable mention for securing the largest number of subscription credits in Hygeia during the months of December and January.

Labette County is listed in Group I and was contesting with Auxiliaries with a membership of 1 to 49. While Group II included a membership of 50 to 199 and Group III Auxiliaries with a membership of over 200.

In the contest cash prizes of \$50 each went to Union County, Arkansas in Group I, Berks County, Pennsylvania in Group II and Cook County, Illinois, Group III.

Mrs. C. S. McGinnis, Parsons, Kansas, is Hygeia chairman of Labette County Auxiliary and has not only sent in a creditable number of subscriptions but has done constructive work with the magazine.

When she found an article in Hygeia which she thought would be of particular interest to some acquaintance, she handed the magazine to this person calling attention to the article. Later she approached the person for a subscription, stressing the six months offer for one dollar. Many of her orders are \$1 subscriptions and she has now an enthusiastic list of subscribers.

She also had the cooperation of her Auxiliary which has a membership of only fifteen.

Mr. Cargill—our circulation manager is presenting to Mrs. McGinnis a statuette of Hygeia in recognition of her splendid work.

Shawnee County is among the counties listed as having reached or gone over their quota. The remarkable thing about Shawnee is that last year they sent in no subscriptions and this year received national recognition for their outstanding work. Mrs. L. A. Curry, Topeka, is the Shawnee County Hygeia Chairman.

It is gratifying to note that more than 6,242 subscriptions were sent in during the National Contest this year as against 4,747 in the last contest and 3,855 in 1937.

To Hygeia Chairmen and Auxiliary Members:

We have a limited time to work before our Hygeia year ends. Splendid reports are coming in from several counties in Kansas. Labette County received honorable mention in the National Hygeia Contest.

Has your Auxiliary made its quota, one subscription for each Auxiliary member? We have 289 Auxiliary members in Kansas. Shall we make our state quota?

Let's measure up to our responsibility and have a good report at the State Auxiliary meeting in Topeka in May.

Tennessee has Hygeia in every public, elementary and high school in the state. Can't we have this for our goal in the near future for Kansas?

"Give the best you have to the best we have—Hygeia," is the request we have from Mrs. James D. Lester our National Hygeia Chairman.

Mrs. T. D. Blasdel, *State Hygeia Chairman*.

Members of the Central Kansas Auxiliary were guests of the Cosmos Club in Russell at a Cancer Control meeting, March 2. The meeting was followed by a St. Patricks tea, after which they Auxiliary members met at the home of Mrs. F. S. Hawes for their business meeting. Mrs. G. H. Pennel, Russell, was elected to membership. Mrs. F. E. Coffey spoke of the plans for the state meeting in Topeka. The following delegates to the state meeting were elected: Mmes. W. Y. Herrick, Wakeeney; Alza McDermott, Ellis; Mrs. F. S. Hawes, Russell; Mrs. J. B. Carter, Wilson; Mrs. Alfred Horejsi, Ellsworth; Mrs. H. R. Bryan, Hays. The Auxiliary members were guests of the doctors at a 7 o'clock dinner at the Holland Hotel.

The Sedgwick County Auxiliary's board of directors met March 6 at the home of Mrs. Henry Hodson. At the tea Mrs. Hodson was assisted by Mrs. Frank Emery, Mrs. Milton O. Nyberg and Mrs. Lester Knapp.

The Sedgwick County Auxiliary met as hostesses, at a brilliant tea in the Pine Room of the Commons Building, Wichita University, March 12. Featured entertainment was a review of "Heads and Tales" written by Elvina Hoffman and reviewed by Mrs. D. L. Basham. Musical entertainment was songs by Mr. Orcemith Smith and Mr. Edwin Brimmer.

The newest addition to our Auxiliary family is Neosho County, organized March 10 with Mrs. J. F. Edwards, President; Mrs. J. L. Sherman, Vice-President; Mrs. L. D. Johnson, Secretary and Treasurer. Sister Auxiliaries all extend a sincere and happy welcome.

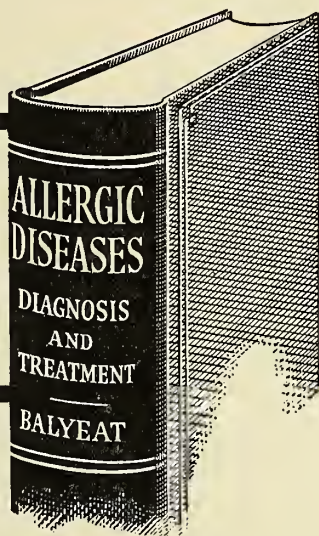
Mrs. Le Verne B. Spake was elected President-elect of the Kansas State Auxiliary at a meeting of the board in Fredonia. Mrs. Spake succeeds Mrs. Theron Hunter of Topeka, who resigned.

Mrs. Leslie S. Merrill, National Third Vice-President, after analyzing the obstacles to effective auxiliary work, both urban and rural, eastern and western, concludes: "Therefore whether we be eastern or western, urban or rural, today's crying need is for lucid thinking, clarity of purpose and a firm resolve for cooperative action. Every doctor's wife should make Auxiliary work her primary activity in the interest of preserving the ideals for which the medical profession has stood since the days of Hippocrates."

Mrs. Arthur A. Herold, National Chairman of Legislation, in her letter in the current news letter mentions several articles and books on public health subjects worth study and discussion. Among them is the February American magazine which has an article by a physician who, after years of country practice goes to a large city. He finds much to criticize in urban practice, especially the fad for specialists. In the January issue of Time is an article favoring socialized medicine by Dr. Henry E. Segrist of



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Johns Hopkins. American Future, a new magazine, contains an exhaustive article on socialized medicine by Dr. Charles G. Hoyd, Past President of the A.M.A. The American Mercury discusses "State Medicine, Navy Style," an article antagonistic to federalized medicine, a much discussed book is "Health Insurance and Medical Care," "The British Experience" by Dr. and Mrs. Douglas W. Orr.

Mrs. Herold asks that members read carefully the report of the Auxiliary committee on legislation published in the Journal of the A.M.A., February 4.

The Colorado Auxiliary has a state benevolent fund which is steadily increasing. It is used for doctors and their families in need. Coin banks have been distributed to all members with the expectation that when opened next autumn, there will be found a least one cent in each bank for each day.

Ms. M. C. Ruble was hostess March 10 in her home at a one o'clock luncheon to members of the Labette County Auxiliary and their guests, state officers of the Kansas Auxiliary. Mrs. F. E. Coffey, State President, was the guest of honor.

The Labette County Auxiliary held their March meeting at the home of Mrs. A. C. Baird. After the business session Mrs. M. C. Ruble reviewed the book "Skin Deep" by Margaret Phillips.

#### AUXILIARY NOTES

The great success of the recent Cancer Control Program in Cloud County was due in large part to the activity of Mrs. C. D. Kosar and her Auxiliary assistants. Mrs. Kosar, as Chairman of Cloud County Women's Army for Cancer Control, enlisted the cooperation of every serious organization in Cloud County, particularly those in Concordia. Nearly every member of the Auxiliary participated in the

work of the several committees. In addition to this general work the Auxiliary had special committees of their own to care for feminine guests and to provide for the program of their evening meeting. The Concordia newspapers gave a great deal of front page publicity to this splendidly organized campaign.

There was a large attendance at luncheon and afternoon meetings. The Auxiliary met at the Barons House for dinner meeting, which included the dentist's wives. Mrs. Frank Coffey, President of the State Auxiliary, and Mrs. Donald Muir, State Commander of Women's Army Cancer Control, were speakers at the dinner. The drive for cancer-control does not begin until April 10; however twenty-five voluntary memberships were taken at the meetings.

The Sedgwick Auxiliary at a luncheon meeting April 10, elected the following officers: Mrs. J. S. Reifsneider, President; Mrs. C. H. Warfield, Vice-President; Mrs. H. R. Hodgson, President Elect; Mrs. N. C. Nash, Recording Secretary; Mrs. C. K. Wier, Corresponding Secretary. At the luncheon the members were addressed by Rev. F. J. Fagen, C. S. S. R., on the subject, "My Hawaiian Adventure." Mrs. Fred Sohn gave a vocal solo.

The Auxiliary board of the Sedgwick Auxiliary were entertained at luncheon at the home of Mrs. Bruce Meeker, April 3. The assisting hostesses were Mrs. H. N. Tihen, Mrs. O. C. McCandless and Mrs. C. K. Wier. Routine business was transacted after the luncheon.

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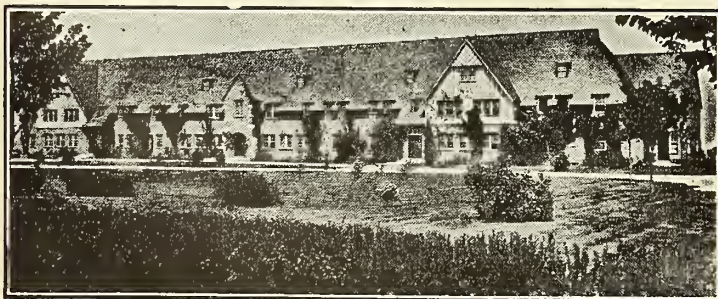
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# The Journal Of THE KANSAS MEDICAL SOCIETY

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## PRESIDENT'S ADDRESS

N. E. Melencamp, M.D.

Dodge City, Kansas

In this the 80th Annual Meeting of The Kansas Medical Society, I feel especially honored in having the opportunity to address you as President, to try in a small measure to give you some of my impressions, and express my appreciation to the membership for the honor bestowed and for the very loyal support I have enjoyed.

The past year has presented some difficult problems and controversies that at times were rather disheartening but with the concerted effort of the Executive Committee, the Council, the House of Delegates, and the entire membership, some accomplishments have been attained.

Our experience with the controversial matter of the last legislative session definitely convinced me that there is much need for a continuous educational program. To me it is obvious there is a desperate need for complete and more accurate information in the hands of the public. If their judgment is to be sound and reasonable they must be told how changes in medical practice will affect them and what they stand to lose and to gain as patients and citizens. They need to know what it has meant to them that medical education has been improved, hospital services standardized, specialists regulated as to qualifications—that these things were done by physicians themselves under their own compulsion and at their own expense, and this applies to the national threat but more particularly to our recent controversial measure during the last session of our own State Legislature.

The educational program instituted by our State Society and various county societies though rather late in the session, caused many people to admit their lack of information concerning the practice of medicine and to apologize for having signed petitions, asking that a law be passed that would lower the standards of the great healing art in our state.

We are cognizant of many articles in various magazines and papers, indicting the profession, accusing it of selfishness, and of disinterest in the public and especially of the indigent.

We know as physicians that more than a million dollars of service is given daily by the profession. We know that less than five per cent of the people of the United States are no farther than thirty miles from a recognized hospital. No other country in the world is so fortunately situated. But does the public know it? It does not! And it is our fault. We must keep in step with the changing times, and unless an educational campaign is developed and sustained the public will not be prepared to accept good medical services, regardless of how it is organized or administered.

The relation of poverty and ignorance to the health of the population, is such that there can be no solution of the medical problem, until by education the whole population can accept with intelligence the broad conception of health with its economic and social implications.

However, in my opinion until the economic status will have changed, we will continue to have the threat of socialized medicine thrust upon us by professional politicians.

Last October, Dr. Charles Goodrich, President of the New York Medical Society, said: "Any group dependent upon the people for their daily bread should feel that what is good for the public is good for them. Today the modern group in business and industry, as well as education and science, makes an effort to interpret itself to the public. Organized medicine alone must not be cloaked in an inscrutibility sure to be misunderstood."

Organized medicine senses a growing demand for authentic information on health problems and from whom can these answers come except the physician?

We know the requirements and the time and money needed for an adequate medical training. We know of the recent great discoveries as insulin, and liver extract, sulfapyridine, etc., that have been so great a benefaction to mankind—but if the people do, they forget and must be told through the press repeatedly, in my opinion, to impress them by and for whom these great discoveries have been made.

I wish to recognize that Saline County and Sedgwick County are answering the question to some degree, but in my opinion it should be state wide, even a nation-wide program. A program sponsored by the

various state societies and carried on continuously.

As for selfishness of our profession, no man can honestly say the truly indigent has not had adequate medical care; for the near indigent there may be a question, but we are agreed that people that do not have adequate clothing, food and shelter no doubt could not pay for adequate medical care and we are agreed that this group should receive necessary assistance from the state or municipality in which they reside, on the same basis as other necessities. However, this will not be accomplished, except by complete cooperation of organized medicine.

We sometimes wonder if organized medicine is of any practical value to us as physicians here in Kansas. Let me enumerate some of them: First in conjunction with our excellent State Board of Health and may I say with the kindly cooperation of Dr. F. P. Helm, the secretary, we have had some most excellent post graduate courses in cancer, maternal and child welfare, venereal disease, etc., as well as informative talks to the layman, and the printing of valuable pamphlets for you and your patients. Second—to you physicians who dispense—you have been saved the inconvenience and expense of sales tax, which annually saves many times more than your annual State dues. Third—through the efforts of Dr. Mills and his editorial staff you have received a most excellent medical journal every month, a journal that is rated by the A. M. A. as one of the best state publications. Fourth—you have the assurance of assistance from the Defense Fund in the event of a malpractice suit. Fifth—you have each year in our annual session the privilege of attending as good a scientific program and entertainment as can be assembled. All of this for the paltry sum of \$10.00. Most of us spend much more for memberships in other medical organizations or civic clubs, etc., which I sometimes doubt is of much practical value, and certainly not so vital to us as our membership in the State Medical Society.

The tasks of our Society are becoming more complex each year. However, the various committees of our Society have functioned most excellently, and I found it impossible to attend many of these and I trust you will read their reports as published in the Journal. Much of my time this particular year was devoted as you well know to the Committee on Public Policy and Legislation which committee perhaps had more than their share and I think you will agree that with Dr. E. C. Duncan at the helm, that this committee did a wonderful job. To do a good job, however, in these evolutionary or revolutionary times it is going to take more of your time and more of your money to maintain a place in the sun that Kansas medicine deserves.

The finest inspiration of the year to me as President was at the special meeting of the Council held in Topeka in its decision of the *modus operandi* in legislative matters they were practically unanimously agreed, and especially so when our venerable treasurer, Dr. Geo. M. Gray, made his memorable speech, loosened the purse strings and gave us the go sign.

To Clarence Munns, our Executive Secretary, this Society and myself in particular shall always be indebted; his ceaseless energy, his untiring efforts in behalf of our Society, his ability and diplomacy stand out in such a way that our thanks are inadequate.

This has been a busy year, but it shall always be cherished as the richest experience of my entire life, so in closing my term I shall ask you to carry on and show our incoming President, Dr. C. C. Nesselrode, the same loyal support that I have received.

Again I thank you for the great honor and privilege of having served as the President of The Kansas Medical Society.

## THE PREOPERATIVE AND POSTOPERATIVE CARE OF TOXIC GOITER\*

Arnold S. Jackson, M.D.

Madison, Wisconsin

The decreased mortality rate in the surgical treatment of hyperthyroidism during the past two decades has resulted largely from improved methods of preparation and after care of the patient. There have been advances in operative technique such as the perfection of team work and the use of the electrosurgical knife. These developments have shortened the time, decreased the risk and improved the end results of operation. Yet, if it were not for better methods of preparing the patient for thyroidectomy, and if it were not for improvement in the after care, the surgical mortality of hyperthyroidism would still be very disconcerting.

### IODINE FAST CASES

What are the principle factors in the preoperative care that have brought about this decrease in our operative mortality? The greatest advancement in the treatment of patients with toxic goiter was, of course, the demonstration by Plummer of the efficacy of iodine in the preoperative treatment of patients with exophthalmic goiter. Despite this great contribution, the condition of many patients has been

\* Presented at the 80th Annual Meeting of The Kansas Medical Society, Topeka, May 3, 1939.



aggravated and even deaths have resulted from the misuse of iodine in this condition. During the past decade and a half, surgeons have frequently been confronted by a serious problem when dealing with cases of exophthalmic goiter who have become "iodine fast" as an unfortunate consequence of taking iodine for months and even years. Attention was called to the seriousness of this condition in an article, published in 1930 when a series of fifty-seven such cases including four fatalities, was reported.<sup>1</sup> Some of the patients in this group had been taking iodine for years and although their outward appearance had improved frequently, irreparable damage to the cardio-vascular system had resulted. Over half of the group showed evidence of advanced myocarditis and hypertension. Consequently, the problem of the surgeon is enhanced when confronted with such a patient. He and his medical colleagues must decide whether to take the patient off of iodine, whether to give larger doses, and whether or not operation must be postponed indefinitely. Delay may result in serious damage to the cardio-vascular system; further delay will only accentuate the ill effects of hyperthyroidism.

I have tried various methods of dealing with these "iodine fast" patients and years ago I learned with regret that the surgical risk is comparable with cases of exophthalmic goiter operated upon in the pre-Lugol era. In 1925 a thyroidectomy was performed on a young woman who had been taking iodine for six months. Nothing exceptional occurred at the operating table, but a few hours later she developed a typical postoperative crisis and despite every effort

expired within a few hours. As a result cases of this type have since been prepared with the greatest care and have usually been subjected to a two-stage thyroidectomy.

We must look upon these cases of "iodine fast" exophthalmic goiter with the same concern as we regard the advanced cases of toxic adenoma in elderly persons. These are the two types of bad risk cases which greatly enhance the surgical problem of treating hyperthyroidism. The physician, who first sees a case of exophthalmic goiter, can minimize this problem if he will insist that his patient refrain from iodine except during a two weeks' diagnostic trial or in the period of preoperative preparation. Following the first step of a two-stage operation, or in the case of a persistent hyperthyroidism or recurrence following thyroidectomy, patients may be kept safely on iodine for longer periods.

### PSYCHOLOGICAL APPROACH

After the diagnosis has been determined, the first important step in the preoperative preparation is the psychological approach to these apprehensive patients. Many come feeling that they are not ill; they do not want an operation, and they have sought consultation merely at the request of a relative. It is a mistake to discuss operation when the patient is first seen; this should be postponed until he is so improved he no longer dreads the thought. The utmost tact and diplomacy are required of all who come in contact with the patient and in this respect a great deal can be accomplished by the family physician. He



Patients having adenomatous goiters should be advised not to delay surgery until they are in the condition of this patient.



A case of iodine fast exophthalmic goiter. This patient took iodine for six months and came to operation in a very serious condition.



Case of advanced toxic adenoma. Thyroidectomy in a case of this type is attended with a high risk if attempted in one stage.



is the one to inspire his patients with confidence and to see that they are spared worry, annoyance, disagreeable subjects, loud noises, etc. It is well to let patients associate and converse with others who have undergone thyroidectomies and to gain assurance gradually from these contacts. It encourages persons with toxic goiters to let them see the pictures and records of patients who were in a serious condition, but who were greatly improved by operation.

By explaining the significance of the metabolism test, a patient is better able to appreciate his true condition and the danger of neglect. If his confidence is gradually developed by these methods, the time will soon come when he will request an operation. There will be no need to confuse him as to the time, but instead he will go to the operating room confident of his doctor's ability to restore his health. The psychological care of these apprehensive persons must be carried out in every detail by the nursing and intern staff right up to the operating table and until his discharge from the hospital. Twenty years' experience in handling persons with exophthalmic goiter has taught me that next to iodine, psychology is the most important factor in their care.

#### PREOPERATIVE PREPARATION

The duration of the preoperative period of preparation naturally depends upon the patient's condition. The average case seldom requires more than ten days' to two weeks' preparation, the time depending on whether or not the patient has been taking iodine recently. The metabolic rate is ascertained before treatment is begun and much could be said about this. A metabolism test is never an index of the patient's ability to undergo operation; it is merely an adjunct in diagnosis and in following the result of treatment. Unfortunately, through many sources of error such as leaky machines, nervous patients who breathe abnormally fast and thus upset the respiratory quotient, and careless technicians, metabolic rates are often incorrect and misleading. A patient, who is not "iodine fast", should receive ten drops of Lugol's solution three times a day for a week. In addition, he should be placed on a high caloric diet of approximately 3,500 calories a day with coffee permanently restricted, a moderate amount of exercise and sufficient sleep. Unless a patient has a decompensated heart or is very toxic, he should not be confined to bed as nervousness and weakness only increase. He should have several hours of rest every day. One-half grain of phenobarbital three times a day is an ideal sedative, and digitalis, one and one-half grains is given three times a day for three days. This drug should not be administered in doses sufficiently large to upset digestion thereby

hindering the patient's attempt to regain weight.

As a matter of economy, we permit the patient to prepare for operation at home, provided his condition is not too serious and home conditions are suitable. If, at the end of a week, his progress is satisfactory, if he is gaining weight and his pulse and metabolic rates have decreased fifteen to twenty points, the same regime is continued a few days longer before operation. Otherwise, he is sent to the hospital for more intensified treatment.

Mention should be made here of the preoperative preparation of patients having adenomatous goiter with hyperthyroidism. Unfortunately, they do not show the same remarkable response to iodine as do patients who have Graves' disease. It was shown by Freeman and myself,<sup>2</sup> in a study of 279 such cases presented at the American Medical Association meeting in 1936 that iodine was either beneficial or else had no effect in sixty-two per cent of the patients with toxic adenoma while thirty-eight per cent were made worse. This is in marked contrast to the effect of iodine in exophthalmic goiter, practically every case of which is benefited unless the patient has become "iodine fast." Despite the fact that one out of three persons with toxic adenomas show an elevation of the metabolic rate after the administration of iodine, it is advisable to give the drug to all patients with toxic goiter. If iodine is given no longer than a week or ten days preoperatively, little harm will result if the patient has a toxic adenoma. On the other hand, if an error in diagnosis is made, for example when an exophthalmic goiter is superimposed upon a simple adenoma, then a postoperative crisis will be averted by the preoperative use of iodine.

In the immediate preoperative care of hyperthyroid patients, it is well to increase the dose of phenobarbital to a grain and one-half at bedtime. The morning of operation, the patient is given a glucose orange juice highball, forty drops of iodine, and five grains of sodium barbitol. One-third grain of pantopon and one-one hundred fiftieth ( $1/150$ ) grain of scopolamin are given hypodermically one hour before thyroidectomy. One-two hundredth ( $1/200$ ) grain of scopolamin is used in persons over fifty years of age as they do not tolerate the drug as well as younger persons. The patient's ears are plugged with vaseline cotton and his head is covered with towels one hour before operation and the room is kept quiet and dark to permit the sedatives to become effective. This makes an ideal preoperative preparation for a local anesthesia, and only once because of an apprehensive friend have I ever found it necessary to resort to a general anesthetic. About ten years ago I gave up the infiltration method and have since used a superficial cervical nerve block anesthesia which is



simple to administer and yet effective. This anesthetic successfully blocks off the superficial cervical and sympathetic nerve supply and permits the operative field to be free of novocain.

After Levine developed the duodenal tube, we occasionally used this as a method of administering glucose and iodine to extremely toxic cases of exophthalmic goiter not only the night before operation, but also while thyroidectomy was being performed, and for the next day or two. In desperate cases, it is a valuable aid.

### POSTOPERATIVE CARE

The problem of the successful postoperative care of hyperthyroid patients is largely one of efficient nursing care. A clever, conscientious nurse can often calm and quiet a highly toxic patient and secure his cooperation. This is essential if the patient is to take sufficient iodine to be able to rest and relax. His room should be dark, quiet, and free of relatives and visitors. If he has an exophthalmic goiter, iodine should be given at once and continued in sufficient doses to control all symptoms of hyperthyroidism. It may be given in doses of five or ten drops and in total amounts up to 150 to 200 drops in twenty-four hours, if necessary. If the patient is brought under control within the first few hours, it may usually be given in ten drop doses every hour if awake. It has been my misfortune to see patients with exophthalmic goiter die because an intern or nurse did not understand or neglected to give iodine as required. When it is not tolerated well by mouth, it may be given by proctoclysis, the subcutaneous route, duodenal feeding, or even intravenously. Above all things, the patient must be made to understand the importance of retaining the iodine. When it is continually emessed, the pulse begins to speed up, the temperature climbs, the patient becomes restless and finally delirious. To combat such hyperthyroidism, the iodine intake must be increased, an ice bag should be added for each degree of fever, which may also be lowered by subcutaneous saline, cooling enemas and oxygen. Pantopon and phenobarbital usually suffice as sedatives. For several years, we have used pantopon in preference to morphine because the element causing nausea and vomiting is eliminated from it.

Patients with toxic adenoma seldom require over thirty drops of iodine a day postoperatively. They present a different picture, one that is almost always satisfactory the first day or two. Then if the outcome is unfavorable, they become restless and there may be a twitching of the extremities as if from cerebral irritation. The pulse becomes weak, thready and irregular, and the patient gradually lapses into a stupor,

coma and death. So far as I know, a means to prevent this is yet to be found. Performing a lobectomy rather than thyroidectomy is the best safeguard for these elderly patients with toxic adenoma.

In the convalescent period, every effort should be made to encourage the patient to gain weight and strength. If the patient with exophthalmic goiter fails to do this, he may have a persistence of the disease or later develop a frank recurrence. The use of iodine may be discontinued in a few days in cases of toxic adenomas as recurrences rarely develop. In Graves' disease, however, it should be continued for at least three months. Patients should be warned against resuming strenuous duties too soon and every effort should be made to protect the patient with exophthalmic goiter from developing a recurrence. The care of the heart in both types of goiter is important and it is essential that the family physician require the patient to report to him at regular intervals to see that proper rest and therapy are continued.

Some patients gain too much weight which they should be protected against. Those who remain underweight should be given a high caloric diet, tonics and vitamins.

In conclusion I feel that the success or failure in the outcome of any operation for toxic goiter may well depend upon the proper pre and postoperative care and consequently upon the close cooperation of the family physician and surgeon.

### BIBLIOGRAPHY

1. Jackson, Arnold S., Ewell, George H.: The Danger of the Prolonged Use of Lugol's Solution in the Treatment of Exophthalmic Goiter With Case Reports and a Study of the Pathology. *American Journal of Surgery*, New Series, Vol. X, No. 3, December, 1930, Pp. 475-481.
2. Jackson, Arnold S., and Freeman, H. E.: The Effect of Iodine in Adenomatous Goiter With Special References to Toxic Adenomas. *Journal of American Medical Association*, April 11, 1936, Vol. 106, No. 15, Pp. 1261-1263.

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X-Rays Help In Gallstone Diagnosis—While gallstones have rarely been established as the cause of intestinal obstruction until after operation, early x-ray examination of suspected cases may establish a definite diagnosis and thus increase the possibilities of successful treatment, Robert M. Lowman, M.D., and Egon G. Wissing, M.D., Boston, declare in *The Journal of the American Medical Association* for June 3.

The authors report a case of successful diagnosis before operation, pointing out that only seven such cases have previously been reported.

They believe that gallstones responsible for intestinal obstruction are usually composed of calcium and therefore opaque to the x-rays. Early x-rays are more likely to show the gallstones than later ones, since after the loops of the bowel have been distended isolation and identification of the shadow is difficult.

## CORONARY OCCLUSION\*

J. Roscoe Miller, M.D.

Chicago, Illinois

Coronary occlusion as a clinical entity is of comparatively recent origin. Perusal of medical textbooks of the last century will reveal no mention of this condition. Discussed at first as of relatively uncommon occurrence, we have recently come to realize that it is far more common than we suspected. Since it has been described so recently we are still going through the stage wherein the less common manifestations are being recognized and more accurate methods of diagnosis both at the bedside and in the laboratory are being developed. Recent figures show that autopsy findings even on medical wards where special attention is being paid to such conditions, reveal coronary occlusion as occurring more than twice as often as it is recognized antemortem.

Necrosis or infarction of the myocardium is the essential pathological change induced by coronary thrombosis. The size of the infarct varies with the caliber of the vessel occluded and the availability of a collateral circulation. Early, the involved area is pale and edematous. Within a day or two there is a circumscribed soft greyish yellow area with a red zone at the periphery. The entire infarct then may become hemorrhagic or dotted with hemorrhagic points. At the end of five or six days softening may ensue and cystic-like cavitation appear, or at the end of five or six days healing may start. Healing is accomplished with the aid of a new collateral circulation which develops at the periphery of the infarct. The completed healing process which involves removal of necrotic muscle and replacement by scar tissue is not completed under four to six weeks. Although it is important to keep in mind a picture of the pathological process, it is equally important to know the many effects of the disease on the heart itself and the body as a whole. If the infarct is a small one there may be no noticeable circulatory disturbances. If the infarct is large, numerous serious effects are possible.

The classical syndrome accompanying coronary occlusion is now easily and almost universally recognized. Occurring more frequently in the male, although probably more common in the opposite sex than has been hitherto suspected, makes its appearance about middle life when vascular degeneration begins to appear. Its onset is sudden, accompanied by severe pain over the precordium and radiating as a rule to the shoulder of the same side, although the

latter is variable. There is a drop in blood pressure with attending signs of shock. Usually there is some gastro-intestinal upset—distention and vomiting being cardinal complaints. Arrhythmias may develop and as time goes on, if sufficient cardiac musculature is involved, signs of decompensation appear. At a still later date leucocytosis and fever occur. This is the textbook picture and is not one which often presents a diagnostic problem.

Clinically, and from a prognostic standpoint, coronary thrombosis may be divided roughly into three stages. First, the acute stage which follows immediately after the occlusion. The picture here depends largely upon three factors; first the size of the infarction, secondly the structures involved, and lastly the recuperative power of the myocardium itself. The immediate danger is from development of an arrhythmia (i.e. paroxysmal tachycardia), particularly since this may lead to a ventricular fibrillation which of course is incompatible with life, or the infarction may be so large that there is not sufficient musculature remaining to carry on, even under basal conditions, or lastly, the conductive system may be enmeshed in the affected area and the communication system within the heart seriously damaged.

As days go by these immediate dangers grow gradually more remote and the patient enters another era fraught with possible mishaps. At the end of four or five days necrosis of the infarcted area is almost complete and fibrosis is not always sufficient to bridge the gap. It is at this time that rupture of the heart muscle may occur with fatal hemorrhage into the pericardial sac. If the patient is fortunate enough to pass successfully through this stage he will find himself at the end of two to three weeks in the third stage. The picture here depends entirely upon extent of the damage and the recuperative power of the heart. The problem now becomes one of evaluation of the cardiac reserve and the institution of appropriate treatment.

The recognition of coronary thrombosis, however, may not be as simple a matter as has been outlined in preceding paragraphs.

It should be remembered that small endarteries may be plugged, with little clinical evidence being present and yet these small infarctions may unluckily involve important pathways in the heart. And secondly, it must be remembered that coronary occlusion may occur without pain. It is these two facts which concern us particularly since it is here that we meet the difficult and all-important problem of differential diagnosis.

I recall one particular case of a laborer, in his early fifties who, after a hard day's work during which he suffered no particular discomfort, went home and

\*Presented before the Shawnee County Medical Society, February 16, 1939.



enjoyed a full night's sleep. Awakening in the morning he experienced no unusual symptoms until he noted that the exertion of dressing brought on a severe dyspnea. By the time breakfast was concluded, cyanosis had developed and the end of day saw the patient in considerable distress with a definite dependent edema. Still he had felt no pain. Arriving at the hospital he was admitted with a diagnosis of arteriosclerotic heart disease with decompensation. An electro-cardiogram, however, revealed typical evidence of coronary thrombosis and a few days later a friction rub developed which helped cinch the already established diagnosis. He went on to recovery. This is a typical case of painless coronary occlusion.

It seems paradoxical that this man's salvation lay in the fact that he suffered a large enough occlusion to embarrass a great amount of muscle and produce acute decompensation. It is conceivable that such a silent accident might have occurred without producing signs or symptoms and that several days later while wielding a sledge or lifting a hod he might well have suffered a rupture of the heart muscle and a fatal intra-pericardial hemorrhage.

Sudden, unexplained symptoms referable to the chest or abdomen in a man past middle age should always be viewed with suspicion. Someone has aptly said that heart disease which suddenly appears in a young man is usually stomach trouble while stomach complaints appearing for the first time in an old man are due to the heart. The statement, of course, is not entirely true but it make a valuable point. Vague gastric distress or symptoms diagnosed as pleurisy by the patient or a strained muscle supposed to have been acquired in yesterday's golf game should always be thoroughly investigated; the patient's diagnosis may be correct but there is a fair chance that the heart and more particularly the coronary vessels are at the bottom of the complaint.

Gall bladder disease, because of the similarity of the picture it produces, is very frequently confused with atypical coronary symptoms. Occurring in the same age group, accompanied by pain which in location and character may be very nearly the same as coronary pain, and presenting other similar features such as fever and leucocytosis it is little wonder that it is so often confusing.

The same may be said of an early pneumonia, ruptured gastric ulcer, pulmonary embolism and pancreatitis. It therefore behooves us to carefully rule out coronary accidents when these conditions present themselves and particularly to remember that there is no rule that makes it impossible for a coronary occlusion to occur at the same time as one of the other conditions mentioned.

Whenever an occlusion is suspected, a careful his-

tory should be obtained. When the symptoms are mild this can usually be asked of the patient himself. If the history is carefully taken it is surprising how often a suggestive story will result. Some dyspnea on exertion of recent origin, or slight cough or dependant edema, not marked perhaps, but unusual enough to attract the patient's attention. If he is a farmer he may attribute it to a cold or ignore it entirely. If a physician, he is too apt to ignore it purposely.

Occasionally the actual occlusion will be preceded by twinges of anginal pain which will continue for minutes or hours and will be relieved by the use of nitroglycerin. The actual occlusion will then be ushered in with a constant persistent pain which is not relieved by vaso dilators. Strangely enough those who suffer from angina pectoris preceding an occlusion usually do not have the severe pain experienced by others when the thrombosis does occur. In my experience the worst pain has occurred in those who had had no premonitory symptoms and no previous complaints. One explanation for this phenomenon is that previous attacks of angina have been the result of a persistent anoxemia of the muscle with a resultant fibrosis which includes the nerve tissue, and infarction of this area does not result in the same dramatic symptoms seen in an infarction occurring in a relatively normal heart muscle. The way patients describe this pain is variable. Some call it a "heavy feeling" under the sternum, others complain of "a ball" in their stomach, while still others complain of an uneasiness between the shoulder blades. One author describes a man who during the acute attack insisted on hanging from the top of the door by his hands, and did so. I have had patients swing their arms about their heads for the same reason. Certainly all of these unfortunates do not suffer from prostration and shock. When present the pain may persist for an hour or a day. The short periods are the ones usually overlooked or diagnosed as something else. At times, although not always, morphine may be necessary to control the pain. Another phenomenon which accompanies the accident is a constant fall in blood pressure. This may be immediate or delayed but is nearly always present even in occlusion of small branches. If the previous blood pressure is known it is of aid in evaluating the pressure after an attack. If not known and there is reason to suspect a coronary thrombosis the pressure should be taken at frequent intervals. It is a most valuable sign.

As the pressure falls the temperature rises, not much, but enough to be suspicious, one degree perhaps, occasionally two, and as the hours pass the white blood count and sedimentation rates increase.

A count of 12 to 15,000 is usual, one of 30,000 possible, even in uncomplicated cases.

Another laboratory finding which is given too little attention and is often misinterpreted is a glycosuria. It is not an uncommon one in occlusion. Because diabetes mellitus is so often a forerunner of arteriosclerosis and subsequently, coronary thrombosis and because one of the signs of an impending diabetic coma is abdominal distress and gastric symptoms, the two are not infrequently confused and the heart pathology overlooked. Occurrence of these complaints in a diabetic should immediately arouse suspicion of cardiac trouble and it should also be remembered that glycosuria may follow an acute occlusion without a diabetes.

The heart signs which accompany a coronary accident are as variable as the symptoms. If the infarction is large, dilatation may occur. The tones are usually weak and may be so distant as to be undiscernible. Very often the heart sounds answer to that descriptive term, tic-tac rhythm. This rapid rate may obscure any murmurs. A slower rate will usually disclose a systolic blow at the apex the result of a relative insufficiency of the mitral valve due to dilatation.

Another sign which is of great importance is the friction rub. I know of no heart sign that is more inconstant or variable in time and position than the friction rub in coronary occlusion. Pericardial effusions rarely occur. Lastly, the possibility of embolism should not be overlooked. When, without warning, signs of an embolism appear in a distant area the occurrence of a silent coronary occlusion with formation of a mural thrombosis should be considered.

In the recognition of these unusual cases, the electrocardiogram plays an important role and is often the only means of establishing a definite diagnosis.

The character and severity of symptoms is the usual guide for treating patients with coronary thrombosis. The patient with mild symptoms generally receives and needs little treatment except a period of bed rest. A long list of therapeutic aids are available for the patient with severe symptoms.

There is clinical and experimental evidence which indicates that certain Xanthine derivatives are capable of increasing the flow of blood in the coronary arteries. Therefore derivatives of Theophyllin or Theobromine should be given immediately and continuously during the period of convalescence. Thus we make an effort to promote the development of a new circulation into the diseased area from which the blood supply has been interrupted. For the initial dose a quicker effect may be obtained by giving 0.5 gm. of the drug intravenously. If given in 50 cc of

50 per cent glucose possible blood pressure depressing effects will be counteracted. Although the Xanthine drugs are the only ones which approach specificity in their action one cannot place too much reliance on the hoped-for effect. To protect the heart containing a myocardial infarct the greatest benefit must come from rest. Rest is not possible until the agonizing distress is relieved. To obtain this a large initial dose of morphine must be given. One-half grain is usually sufficient and subsequently one-fourth grain doses every four or six hours may be needed. To further the complete body rest constant supervision by trained nurses is essential. A well-planned management throughout the entire course of the disease is of the greatest importance. To obtain complete rest for the heart the aim is to hold bodily activity to an absolute minimum by relieving the patient of all possible duties. This requires meticulous attention to small details. The attendants and relatives must be cheerful. No disturbing news should be allowed. The room should be quiet. The patient must be spoon fed; he should not be allowed to use his hands even to reach for a drink. He is not to turn in bed or raise his head. The use of bed pans requires great care. He should be lifted on and off the pan and in no way help himself. Early in the severest cases, cellulorton pads may be substituted for the pan. Reading and talking are to be interdicted. If conditions improve after a week or so in bed, slight activity in bed is permitted but the patient should stay in bed for a minimum of six weeks. After the period of bed rest is over gradual increase in activity is allowed—so gradually that another month should elapse before ordinary activity is resumed. During the period of convalescence the best guide to the amount of activity is the sensation of the patient. Any distress provoked by exertion means that there has been too much exertion. In high strung, nervous patients mild sedation with bromides is helpful during the convalescent period.

The provision of adequate fluid and nourishment is an important part of the early management. In the first few days it may be necessary to use parenteral feedings (such as five per cent glucose in saline, intravenously, slowly administered). Some clinicians believe that administration of large amounts of hypertonic glucose solution given intravenously is a valuable adjunct. After the acute symptoms have passed give a balanced diet with adequate carbohydrate foods. Small meals at frequent intervals are less likely to throw an extra load on the heart. I believe low nutrition diets recommended by some to promote a low basal metabolism are illogical. If the patient suffers from diabetes a very careful dietary and insulin management is needed. Unusual



care should be taken to avoid insulin overdosage and shock.

Acute left ventricular failure which follows acute dilatation of the left ventricle, is often a characteristic part of the picture of acute coronary thrombosis. Its manifestations are severe dyspnea, paroxysmal dyspnea, cyanosis, and moist or sibilant pulmonary rales. Morphine is very valuable for this complication because it curtails the demands on the left ventricle by eliminating anxiety, pain and restlessness. It also aids by suppression of coughing. The administration of oxygen is also of great value for this complication. The favorable response which usually begins one to three hours after oxygen is started may show itself by relief of pain and dyspnea, abolition of cyanosis, suppression of Cheyne Stokes breathing, slowing of heart rate, improvement in pulse volume and heart sound and rising blood pressure. Oxygen may be given by means of a tent with a concentration of about fifty per cent oxygen or by nasal catheter supplying six to seven liters per minute. In the average case it is desirable to keep the patient in oxygen for about seven days. The concentration of oxygen should be gradually lowered before stopping its use entirely.

The indication for digitalis in coronary occlusion is the same as in other forms of heart disease, namely edema or cardiac asthma. It should be used with caution. Epinephrin is sometimes used for the pulmonary edema or cardiac asthma. Recent studies have shown that it is dangerous to use this drug in acute coronary thrombosis. In the treatment and prevention of ventricular tachycardia or ventricular fibrillation, quinidine sulphate in doses of gr. 111 every eight hours is believed to be valuable in the prevention of these complications. Larger doses are used in the treatment of ventricular tachycardia, which is one of the most serious complications following coronary thrombosis.

There are no surgical or medical measures which can prevent a fatal outcome if the heart is ruptured.

Pulmonary emboli are more commonly associated with myocardial infarction than is generally appreciated. If not too numerous or large the pulmonary infarct resolves without therapy. Emboli to peripheral vessels may necessitate prompt surgical interference. If the profundus femoris artery or axillary artery is completely occluded gangrene of the extremity will ensue unless surgical measures are instituted.

The patient recovered from a coronary occlusion should be given careful instructions concerning his mode of life. In fact it is usually necessary to replan the patient's whole existence, particularly since he is too apt to be a business or professional man who has

been used to an unusually active life. His activity must be curtailed and he should be encouraged to adopt a hobby, preferably one not requiring too much exertion. Periods of rest and relaxation are essential and in order to obtain these it is often necessary to reorganize his business connections so that it is no longer necessary for him to carry the load which was previously his lot.

### SUMMARY

Coronary occlusion occurs more frequently than is generally suspected, and it frequently masquerades under symptoms considered more typical of other complaints.

Careful histories, blood pressure readings and laboratory data including electrocardiographic studies are invaluable in the diagnosis of these atypical cases. One electrocardiogram which shows characteristic changes, of course, establishes a diagnosis, however a single negative graph or a normal blood count and blood pressure is not conclusive proof that a coronary accident has not occurred, and if there is a suspicion of cardiac pathology they should be repeated. If only two electrocardiograms are feasible these should be spaced at least a week apart, and preferably at an even greater interval.

In treating acute coronary thrombosis it is important to remember that we are dealing with more than a segment of necrotic heart muscle. Many abnormal physiologic mechanisms follow in the wake of the thrombosis and deserve critical consideration when we manage this disease. The therapeutic measures of greatest value in this condition are: Rest, morphine, oxygen, parenteral glucose, and the Xanthine group of coronary dilators.

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The cure of tuberculosis depends more on what the patient has in his head than on what he has in his chest. Sir William Osler.

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**Sulfanilamide Aids In Ear Treatment**—Sulfanilamide has proved of definite value in the treatment of inflammation of the middle ear, Gilbert E. Fisher, M.D., Baltimore, states in *The Journal of the American Medical Association* for June 3.

In comparing the results in eighty-eight patients receiving sulfanilamide and ninety-five not given the drug he finds that of the latter patients sixty-six required a mastoid operation as against only seven of those given sulfanilamide.

Four of the ninety-five patients who were not given sulfanilamide had septicemia (bacteria in the blood); three of these recovered after operation and one died. None of the eighty-eight patients who were given sulfanilamide had this complication.

Of the patients who were not given sulfanilamide pus was discharged from the ears for sixty-five days as compared to twenty-three days for those receiving the drug.

## SURGICAL TREATMENT OF PROSTATIC OBSTRUCTION\*

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Some years ago there were a great many articles written on prostatic resection with reports of many series of cases and with all grades of enthusiasm about the procedure. The cases reported at that time were necessarily done over a period of only a very few years, because the procedure was a new one, and could not include late follow-up studies.

In the last few years there has been much less written because we are now in a period of digestion of all this material and in a period of study of the late results by a careful follow-up of these cases.

One of the purposes of this paper is to briefly give my impressions of this subject based on a study of the prostate cases operated on since I began doing resections five years ago.

Another reason for writing this is that even during the last year I have received the information that many general surgeons and general practitioners in our state have emphatically expressed their skepticism on the whole subject of transurethral resection. When one is associated with a group of men who are thoroughly sold on a procedure, one may forget that there are others who do not feel that way.

The skepticism, I understand, is based on a fear of the inadequacy of the procedure, or a fear of complications such as incontinence, extravasation, hemorrhage, etc.

By a careful analysis of my cases which represents every case resected and not a selected group, I hope to make a small dent in the fears of the skeptics.

Six years ago when prostatic resections were just beginning to be popularized and before I had studied the method, I felt that certainly this is an operation for the case with a very small obstructing prostate or bar, and especially for the feeble old man, but that the others no doubt should have prostatectomies.

After carefully studying the technic and observing some of the best men in the country do resections, my conception of the applicability of the procedure changed. I then felt that it was probably the operation of choice in the largest per cent of cases and that only in the very large prostates, especially in the young good risk cases was prostatectomy indicated.

The following are some of the more specific ideas on the subject held when I started the work:

1. From my observation of the best operators, resections were easier on the patient than were prostatectomies.

2. Less expense was involved because of shorter hospital stay.

3. If this operation was easier on the patient, naturally more of the poor risks could be operated and get relief.

4. If the operation was feared less, it could also be surmised that more patients would seek relief earlier.

5. If it produces less shock, cardiovascular accidents should be fewer.

6. Possibly complications from infection should be less troublesome.

7. I decided not to do vasectomies unless epididymitis became too frequent and troublesome a complication.

8. By most careful attention to the details of the technic described by the teachers who did the pioneering, I hoped to avoid accidents such as incontinence, extravasation, uncontrollable hemorrhage, etc.

9. Five years ago the largest number of urologists in this country felt that transurethral resection was the best treatment for carcinoma of the prostate even though it was only palliative.

10. About bladder stones, I felt that if the calculi were large enough to require a cystotomy, it would probably be followed by prostatectomy. It happens that every one of the 11 cases that I have had with calculi were resected.

11. We hoped that by carefully following the principles laid down by the pioneers in this work, the mortality rate would not be too high.

12. At that time it was not generally felt that removal of large amounts of tissue was necessary to get good results. This idea has changed completely as will be shown later.

The above are some of the conceptions held five years ago. My experience since then consists of operations on 108 men. Six of these were prostatectomies. They were selected cases and are all living and have a good result. On 102 cases transurethral resections were done. This is not a large number, but the careful study of even a small group, especially the follow-up study (and I have been able to keep track of almost every one of these cases) is a definite help in determining to what extent the ideas one started out with were right.

Now to go over the points listed above, namely, the ideas held five years ago and make my present comment on them:

1. There is no question that a well executed resec-

\* From the Axtell Clinic, Newton, Kansas.



tion causes much less shock and less discomfort to the patient than a prostatectomy.

2. With the usual time in the hospital of ten days to two weeks for the case that is in fair general condition the expense of course is very much less.

3. In this group there were twenty-two of the benign hypertrophy cases, who I feel, either due to age or poor condition, could not have stood a prostatectomy and this does not include any of the "bar" cases or carcinomas. All but two of these stood the operation all right, and these two are the only two postoperative deaths in the series and they will be discussed under pyelonephritis.

4. There were only six patients with early but very definite signs and symptoms of obstruction, on whom I would have hesitated to advise prostatectomy, and who I don't believe would have consented to a procedure as formidable as prostatectomy, on whom a resection was done, with no complications and with excellent results. More cases who would have been willing to have an operation were advised not to be operated until, or unless, more obstructive signs and symptoms developed.

5. It happens that there were no postoperative cardiovascular accidents in the group of cases in spite of the fact that forty-nine were past seventy, fourteen past eighty, and two past ninety years of age. One of the men past ninety years, a carcinoma case, died of a cerebral hemorrhage two months after leaving the hospital and it is possible that the operation was a predisposing factor. The other man who was in his ninety-first year when operated, died of pneumonia four years later. Many of the cases had hypertension and cardiac pathology.

6. It is rare for a prostate case to come in without some infection in the urinary tract from the kidneys down to and including the prostate gland itself. Infection is the greatest single hazard for the prostate surgeon. The slightest procedure such as catheterization may flare up a quiescent pyelonephritis. In the two postoperative deaths in this group, pyelonephritis was the major factor. They were both very poor risks and completely obstructed, had only moderate sized prostates, and it was considered that resection would be no more hazardous than cystotomy. But it proved to be more than they could stand. One of these men died at home six weeks after operation and the other one died in the hospital. As stated above infection is a definite hazard in any type of prostatic surgery, but I believe less so in resections than in prostatectomies.

7. Epididymitis has been a rare complication and only one vasectomy has been done in the entire group. Two cases came in with epididymitis. Their

preoperative preparation was with indwelling catheter. The symptoms rapidly subsided and did not flare up again after resection. Five cases had a mild epididymitis during the postoperative period usually coming on after the first week. None of them had severe pain and they were all treated simply with a suspensory and none of them had to go to bed because of the complication. I still feel that vasectomy is not a necessary procedure.

8. There were no cases of postoperative incontinence. There have been no cases of extravasation. In only one case was there sufficient early hemorrhage that the patient was re-examined the same day to stop bleeding and this patient recovered. In one of the two poor risk cases that died postoperatively and described under pyelonephritis, bleeding was also a factor. Four of the men had to come back to have their bladders irrigated because of late bleeding and indwelling catheters were left in for a day or two. In none of these was the bleeding excessive nor did it prevent a good recovery and a good end result.

9. There were only seven cases of carcinoma in this group. Four of these have died. The first one died after six months, the second after one year, the third after two years, and the fourth, a man of ninety-two, died of a cerebral hemorrhage two months after operation. None of these men developed an acute retention and only one of the four, the one who lived two years, had troublesome obstructive symptoms before he died.

The other three are living two and one-half years, fourteen months and twelve months after resection. The man who has now gone two and one-half years since his first operation, developed an obstruction one year after the first resection, so he was resected again and now is still feeling well and working on his farm one and one-half years after the second resection. The other two are reported to be getting along well to date.

Since radiotherapy has so little to offer in carcinoma of the prostate and radical prostatectomy is too formidable a procedure for the usual case, resection and permanent cystotomy are the only alternatives. Resection leaves the patient with a normal urinating apparatus and is the procedure of choice even though it may have to be repeated.

10. There were eleven cases with bladder calculi. In five lithopaxy was done and in six cystotomy. It happens that none of these cases had very large prostates and therefore were all resected, even though preliminary cystotomies had been done on half of them. Two of the early cases, both very poor risks, had a persistent suprapubic sinus until sufficient tissue was removed at a second resection. Resection

following cystotomy is perfectly satisfactory if sufficient tissue is removed to relieve the obstruction.

11. The postoperative mortality in this group consists of two cases (about two per cent) which have already been described under item six, since the chief factor in the cause of both deaths was pyelonephritis. There was no chance to select cases but they were taken just as they came into our clinic and as noted under item three, a good per cent were poor risks. By careful attention to the details in the management of these cases transurethral resection is a safe procedure.

12. The removal of adequate amounts of tissue is absolutely essential to good end results and if several resections are necessary to attain this end, they should be done. As experience increases more tissue can be resected at one sitting.

In this group six patients had three resections twelve patients had two, and eighty-four one. The largest amount removed at one operation was fifty-three grams and the largest amount in one patient eighty-four grams. Excluding the "bar" cases and the carcinoma cases, the average amount of tissue removed per patient was 22.5 grams. The present trend with all men who are doing resections is to take out more tissue than was done a few years ago. The final functional result in practically all of the cases in this group, and this includes the patients' opinions too, was very satisfactory.

### CONCLUSIONS

In my opinion, prostatectomy should be done in a few more of the cases with the larger prostates than was done in this group. If the man with a good sized prostate is in good general condition, prostatectomy is the best procedure because it most thoroughly accomplishes the desired end, namely sufficient removal of obstructing tissue. In the 108 cases only six had prostatectomies. There are from seven to ten more of the cases with the large glands, and whom I believe could have stood prostatectomy, who would have been saved a later resection if their gland had been removed. Infected retained prostate tissue is probably responsible for most of the late bleeding attacks and for persistent dysuria.

The reason for not doing prostatectomies on a few of the cases was that they insisted on a resection, and when there may be some question in our own minds as to the procedure of choice, one may occasionally be justified in taking the patient's wishes into consideration. One of my early cases had waited three or four years for the perfection of what he called the electrical operation, because several of his friends had not done well after prostatectomy. It was useless

to talk prostatectomy to him. With two resections at his first hospital stay and a third at a later date and with the removal of a total of eighty-four grams, he got a good result, but probably prostatectomy would have been the better procedure in his case. At the present time, fewer patients insist on a certain procedure but are willing to leave these details to me.

The largest number of cases of course do not have the very large prostates and I see no excuse for subjecting a man with a small or moderate sized obstructing gland to prostatectomy when a resection is such a very benign and effective procedure and is so much easier on the patient, physically and financially.

The poor risk patient with a large prostate is best handled by several resections with as much time as needed in preparation and between the operations. Suprapubic drainage either by the classic cystotomy or by a small tube put in through a trocar is sometimes very desirable.

The general safety of transurethral resection is shown by the low mortality in the thousands of cases reported. My judgment, based on experience in 102 cases and the judgment of men in our clinic who have gone through many years of experience with prostatectomy is that the procedure is much more benign than prostatectomy and the end results have been equally satisfactory.

## A PEDIATRIC PROGRAM FOR THE FAMILY DOCTOR\*

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When the family doctor delivers a baby he holds a place in that family circle which no other human is privileged to have. If he realizes and accepts his full responsibility, no one can ever come between him and his patient. It is the family physician's duty after his first examination of the pregnant woman to explain the value and importance of periodic examinations during pregnancy. The expectant mother will be as interested in the health of her unborn baby as she will in her own welfare, and here lies a long neglected and unusual opportunity for the physician. If he convinces the mother that he will exert every effort and the latest medical knowledge to help her deliver a healthy, normal baby fully prepared to meet the demands of life, that baby's future will be placed entirely in his hands. If the family physician is not willing or prepared to accept this responsibility, he

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cannot complain if the mother looks elsewhere for advice. The family physician cannot be a specialist, but he certainly should be qualified to do a normal delivery and to supervise the care, growth, and development, and immunization program of the normal child.

The practice of medicine today has become to a large degree the prevention of disease. Large insurance companies, large industrial organizations, and most of the educated public have learned the value of periodic examination, routine immunization, properly balanced diets, and healthy living. The large organizations and the various governmental agencies are spending millions of dollars to teach preventive medicine and to develop the various contributions to medical science made by physicians. The family physician seems to be the last one to become educated in this field. He has stood idly by while the various agencies have usurped his place and lured his patients into prenatal clinics, baby clinics, pre-school clinics, parent-teacher's roundups, school clinics, anti-tuberculosis clinics, heart clinics, psychiatric conferences, adjustment conferences, and so ad infinitum. None of these various activities could function without patients, but no intelligent, loyal, properly instructed parent would allow a strange nurse to take her child to a strange doctor and away from her family physician without his knowledge and consent. We must have an adequate public health program which will insure proper supervision and adequate medical care for the children of the indigent and the indifferent, but the well-informed family doctor will provide the necessary medical supervision of his private patients and will leave little for the crusading health agencies to garner. While the various public health organizations will have better advertising facilities and fewer scruples about using them, the family doctor has the first opportunity and the most intimate and confidential relationship with his family. If he is prepared to advise his patients, the radio and newspaper doctors will have little influence and the drug store windows small appeal.

About half of the child's health and character are determined by his heredity. The foundation of the coming baby's health is built during pregnancy. The enamel for the deciduous teeth is laid down in the third month, that for the permanent teeth is deposited in the ninth month of pregnancy. A reserve of iron is deposited in the liver during the last three months of pregnancy to furnish hemoglobin for at least the first six months of life. Thus the mother's nutrition must provide an adequate supply of calcium and iron for herself and for her fetus. It must also include an abundant supply of vitamins, par-

ticularly vitamins A, B complex, C, D and K. These can be bought cheaper in the grocery than in the drug store. The mother's thyroid gland must function properly and there must be sufficient iodine in her diet for the fetus. The infant will then be born with a normal reserve of iron, calcium, iodine, vitamins, sugar, and healthy blood to begin a normal life.

The baby's next problem is to command some of the doctor's time. It is almost the rule in the home and even in the hospital for the doctor who does the delivery to hand the child over to the grandmother or the nurse and then devote the rest of his time to the mother. After the baby is bathed and wrapped up, in the majority of cases, he is never again undressed for examination unless he stops breathing, or turns blue, or cries incessantly. It is the physician's duty to devote some of his time to a careful and complete examination of the new baby. For some reason or none most physicians wait for the grandmother or the nurse to call their attention to abnormalities or deformities in the newly born infant. The physician must determine before delivery if he expects a premature or even immature infant. If so, provision must be made beforehand for his care. This includes provision for heat and humidity. The body temperature must be kept between 99 and 100 degrees F. The humidity should be kept between fifty and seventy-five per cent. Immediate care of the premature will reduce the mortality from seventy-five to twenty-five per cent or even less. The newly born infant must be examined immediately to see if he cries and is breathing properly. If his lungs are not fully expanded the physician has twenty-four to forty-eight hours to provide adequate expansion by any means available. Mouth to mouth breathing, carefully done, is usually sufficient; ninety-five per cent oxygen and five per cent carbon dioxide by inhalor is preferable. The heart must be examined to detect congenital deformities. Next, the infant's color must be noted to recognize congenital anemia, jaundice, or cyanosis. A yellow vernix caseosa and an abnormally large placenta in a jaundiced baby denote erythroblastosis fetalis or icterus gravis. A waxy pale infant denotes probable congenital anemia. A differential blood smear will settle the diagnosis immediately and prompt transfusions of whole blood will save lives. A delay of twenty-four hours may be fatal.

A drowsy or comatose infant may indicate nembutal or a related drug used during delivery. Oxygen and carbon dioxide may be necessary to establish respiration. The next baby will probably not be delivered by this same doctor with these drugs. Coma, convulsions, and cyanosis, particularly after a long

second stage or a difficult delivery, may be symptoms of intracranial hemorrhage or injury. This infant should have a spinal puncture. If the fluid is bloody, the spinal drainage should be repeated every six or twelve hours until it is clear. The infant should be placed with his head elevated and covered with an ice cap and he should not be disturbed. The feedings should be given with a dropper or by gavage.

Cyanosis in the newborn infant is due to atelectasis, intracranial injury, congenital heart disease, or drugs given to the mother. The treatment of these conditions has been discussed.

The infant is next examined for anomalies or defects. A mongoloid idiot should be detected at birth, and the physician should recognize the condition before the mother does. Treatment is, of course, of no avail, but the blow may be softened for the parents. A cretin should also be recognized at birth and dessicated thyroid gland must be started early. Examination must be made for an imperforate anus. The treatment requires expert surgery, not a blind incision.

A congenital hydrocephalus is easily detected, and an examination should be made for spina bifida and meningocele.

An Erb's palsy should be recognized and treated immediately. A club foot or a dislocated hip should be promptly recognized and treated. These deformities, if properly treated early, may be completely corrected. The results of later treatment are much less satisfactory. The neck should be examined for torticollis or for fistulae or bronchial cysts.

The infant should be given a formula when he is twelve hours old. There is nothing to be gained by feeding sugar mixtures in the first twenty-four hours. The initial weight loss is physiologic and is best treated by twelve hours of neglect. The infant may be given boiled diluted cow's milk or diluted evaporated milk and corn syrup. The physician need not advertise any particular brand of canned milk or syrup. It is more important that he regulate the dilution and caloric requirement. When the breast milk appears the formula may be continued to complement the breast as long as necessary. The premature infant should be fed after six hours. He must be fed a concentrated formula every one or two hours. He must be given cod liver oil and iron early and regularly.

The newborn infant should be re-examined before he is discharged from the hospital or from the physician's care. Particular attention should be directed to the skin for evidence of impetigo or eczema. Routine circumcision of the male infant is uncalled for. The surgically minded physician should find

some other indication. At this time the mother must be given detailed instructions in nursing care, hygiene, and feeding. At the same time the parents must also be educated to the advantages of periodic examination and supervision of the infant. In my practice I can prove that parents who bring their infants to the office for routine periodic examination and immunization spend far less for medical care than do those who call only when the child has developed an illness. The mother is instructed to bring the child into the office every month for the first year.

At the first month I look particularly for defects which may not have been recognized before. The infant is first weighed and measured. He is then examined for the abnormalities noted above. An Erb's palsy may now be detected for the first time. An umbilical hernia may now be strapped. If it is kept strapped, it will usually close. At this time the question of breast or artificial feeding will have been decided. Cod liver oil and orange juice are now started.

At the second monthly visit I note particularly the gain in weight and length, and the mental development. The infant should be able to hold his head up. If he looks pale a blood count should be done, at least a hemoglobin determination. The eyes should now focus. Eczema may make its first appearance.

At the third month I advise immunization against pertussis with the concentrated vaccine. Whooping cough is the most serious infectious disease in the first two years of life. It carries the highest mortality and morbidity. Treatment is of little avail. The only drug of value is codeine in large doses. Therefore, in the face of this situation, any preventive measure which is first of all harmless and secondly, offers a high percentage possibility of prevention or even of modification of the disease deserves adoption. The earlier the vaccine is given the better. I give infants the double concentration vaccine, 1 cc followed in one week with 1½ cc followed in another week with 1½ cc.

At four months most of my infants have doubled their weight. I now look particularly for evidence of rickets, i.e., pallor, head sweats, thickening of the costochondral junctions, etc. Cereal is now added to the diet to replace one milk feeding.

At five months I look again for rickets and anemia. A second cereal feeding is added.

At six months most infants should sit alone. Vegetables may now be added to the diet.

At seven months I vaccinate the infant against small pox. I do not vaccinate the newborn infant because the results are often unsatisfactory and not



effective. I do not vaccinate infants with eczema until the skin is clear.

At eight months I put the infant on whole milk, either evaporated or boiled. No child should ever be given raw milk. Boiling for five minutes makes a milk sterile and easy to digest. Boiling also homogenizes milk and makes a soft curd, whether these factors have any great value or not. Promotional advertising and ambitious young doctors have added vegetables and cereals to the infants' diets much earlier. Fortunately most infants can tolerate almost any food, but they will get along better and make as good development without crowding. A gradual introduction of new foods will provide variety and interest throughout many months and will prevent many feeding problems and much allergy.

At the ninth month I give the infant his first injection of diphtheria toxoid (1 cc). This should not be given earlier because most infants carry over a natural immunity until this time, and early artificial immunization will result in a higher percentage of failures. The alum precipitate toxoid produces too much pain and too many nodules. The percentage of subsequent negative Shick tests is only about seventy-five.

At ten months almost all of my infants have tripled their birth weights and are able to stand. A delay in development must be carefully investigated. Particular attention must be paid to the hips and the feet.

At eleven months the second injection of diphtheria toxoid (1 cc) is given. After two months a Shick test must be done to be sure of protection. With two injections of toxoid at two or three month intervals about three per cent of the infants will show a positive Shick test. A third injection of toxoid will usually produce a negative test. At one year the child is re-examined for normal growth, development, and nutrition. He should walk, say a few words, and have good coordination. A urinalysis should be done or repeated if it has been done before. The mother is now advised to have the small pox vaccination repeated every five years to keep the immunity. Regular revaccinations will produce only immune reactions and no "takes." She is also advised to have the Shick test repeated every five years. The child is now given more solid foods and three meals a day. The mother is advised to return every three months for the second year and every six months thereafter.

Attention is now directed to posture and feet. Fatigue posture is corrected by prescribed exercises. A tendency to flat or pronated feet is treated with corrective shoes and later with foot exercises.

During this entire period of prevention and peri-

odic examination the mother is instructed to bring her problems to her family doctor. If he has been thorough and conscientious she will do so. New ideas, newspaper campaigns, food fads, new or advertised immunization programs will be first presented to the child's doctor where they belong. The doctor will decide when and how his patient shall be treated. It is of much greater value to the child and his family that a record of the child's immunizations shall be kept on file in the doctor's office than for statistics to be accumulated in the city hall.

The net result of this program will be an increasing, loyal, and devoted practice of healthier mothers and children. Small pox and diphtheria will be banished. Whooping cough will be rare and if it occurs it will be mild. Measles and scarlet fever will be modified and mild because they will be treated early. Deficiency diseases and undernutrition will be rare and the older standards for normal growth and development will be totally inadequate. The ambitious family doctor will accumulate a set of records which will provide him with an endless amount of material for clinical investigation and illuminating reports.

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## PRIMARY SARCOMA OF THE LUNG WITH BRAIN METASTASIS\*

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Primary sarcoma of the lung is a tumor of rare occurrence. Although Adler<sup>1</sup> in 1912 was able to collect ninety cases from the literature, Ewing<sup>1</sup> states that only a minority of these cases were well enough authenticated to prove the diagnosis. Bell<sup>2</sup>, in reviewing the English, French, and German literature from 1900 to 1931, was able to find only thirteen instances in which the diagnosis was satisfactorily established. In a series of 7,272 autopsies performed by the Department of Pathology of the University of Kansas Hospitals, there have been thirty-eight cases of primary malignant tumor of the lung, or an incidence of 0.52 per cent. There has been, however, only one case of primary sarcoma, with the incidence of this tumor 0.014 per cent.

Many of the tumors which in the past were diagnosed primary sarcoma of the lung have since been shown to belong to the class of undifferentiated, or oat cell carcinoma, originating in the bronchi. This type of carcinoma, which resembles a sarcoma grossly and histologically, occurs much more frequently than

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the sarcoma, and must be ruled out if the diagnosis of sarcoma is to be made. Another stumbling-block in the diagnosis is the fact that sarcomas arising in other parts of the body very frequently metastasize to the lungs, giving rise to secondary tumors which may easily be mistaken for primary growths, especially if the original tumor is small or has previously been removed. The case described below also illustrates the fact that a primary malignancy of the lung

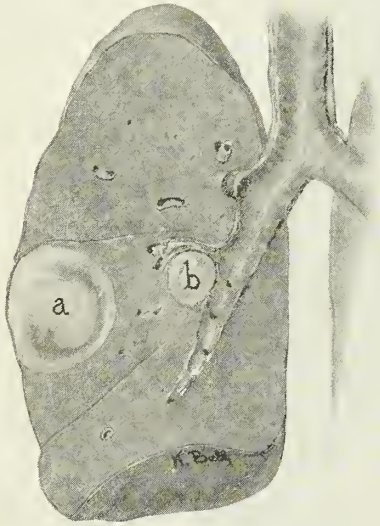


Fig. 1. Sketch of vertical section through right lung showing: (a) primary tumor, (b) metastasis in hilar lymph node.

may not be recognized clinically, but may manifest itself first by its distant metastases.

Case Report: J. H., white male fifty-one years of age, American, salesman by occupation, was admitted to St. Margaret's Hospital October 16, 1938, complaining of paralysis of left arm and convulsions. Symptoms first appeared three weeks before admission, with paralysis of second and third digits of left hand, gradually progressing to all the digits, hand, and forearm, but without sensory impairment. One day before admission, while driving his car, he felt a tingling and quivering of the muscles of the left forearm, after which the left thumb began to jerk. The hand, forearm, arm, head, and neck became successively involved in a clonic convulsion. He did not lose consciousness, but could not speak, and had difficulty in breathing. He was able to continue driving his car across a bridge and stop, and was helped home by a passing motorist. The next day, he had a

similar attack, and was brought into the hospital. The past history was negative, except for a short period of night sweats, fever, and cough two years before. There was no history of surgery, and no history could be elicited of removal of any moles, warts, or other tumors.

General physical examination, including eye grounds, heart, lungs, and abdomen, revealed no abnormality. The blood pressure was 120/58. Neurological findings included motor paralysis of left forearm and hand, hypesthesia of the same area, and bilaterally positive Babinski sign. X-ray showed the pineal body shifted to the left. Laboratory examinations were otherwise negative. A tentative diagnosis of brain tumor was made. On October 17, the patient had two seizures similar to those described in the anamnesis, except that they also involved the left leg. Weakness, lethargy, and muscular twitching progressed without further convulsions until October 24, when a burr-hole craniotomy was performed in the right parietal bone over the arm center of the right Rolandic gyrus. A tubular biopsy was taken, and smears of the tissue showed highly malignant neoplastic cells. The histologic report on paraffin sections of this tissue was "metastatic spindle cell sarcoma." The wound was closed without any attempt to remove the tumor. The patient's temperature rose to 102 degrees, and he expired eight hours after the operation, without regaining consciousness.

Autopsy showed a well developed, well nourished white male with no signs of weight loss or muscle atrophy. A short, freshly sutured incision was seen in the right parietal region of the scalp. Examination of the lungs revealed a tumor mass located just under the pleura of the right middle lobe in the anterior axillary line. It was fairly well circumscribed, oval in shape, measuring 8 x 5 x 5 cm. in size, and rather soft and friable in consistency. The cut surface presented a uniform, light gray, very cellular appearance. At one point, the tumor was seen to have grown into the lumen of one of the smaller branches of the pulmonary vein. At the hilum of the lung, just beneath the bronchus of the middle lobe, was found another tumor mass, evidently situated in a lymph gland. This was oval in shape, 3 x 2 x 2 cm. in size, and of the same friable, cellular structure as that of the larger mass. It had eroded the bronchus, and a nodular, fungating mass could be seen projecting into the lumen, but not obstructing it. The spleen was hyperemic and congested. The liver showed some yellow mottling, suggesting fatty change. The bladder was markedly distended, containing 1000 cc. of urine. The brain weighed 1700 gm. The right parietal lobe, in the region of the precentral gyrus, showed a round, discolored area three cm. in di-



ameter, which bulged slightly above the surrounding brain. It was soft, cut easily, and was found to be an almost spherical mass of soft, gray, friable tissue, well circumscribed and easily separable from the brain tissue. Surrounding it and penetrating the brain substance internal to it was a considerable area of fresh hemorrhage. Small hemorrhages were also found in the pons and along the aqueduct of Sylvius.

Histological study showed an identical picture in the masses from the lung, hilar lymph node, and brain. The tumor was made up of very dense sheets and masses of small, interlacing, dark-staining, spindle-shaped cells with little or no stroma, and showing considerable cell variation with many mitoses. It was exceedingly vascular, showing numbers of small, thin-walled blood vessels, the tumor cells lying directly on the endothelium. Many areas of necrosis were present in the tumor. No definite capsule was present, and the tumor was seen to be invading the surrounding tissues. A section stained by the Wilder silver impregnation method showed a fine fibrillar reticulum between the individual cells, a finding characteristic of connective tissue tumors, and absent in those of epithelial origin.

Anatomical diagnosis: Primary spindle cell sarcoma of the lung with metastasis to the hilar lymph nodes and to the brain, cerebral hemorrhage, pontine

hemorrhage, fatty change in the liver, acute splenitis, acute distention of the bladder.

Comment: Since primary sarcoma of the lung is rare, every other possibility must be eliminated before making the diagnosis. It is especially important to consider the oat cell carcinoma here, because of the metastasis to a hilar lymph node. However, in this case, it is felt that the diagnosis of sarcoma is justified because (1) the tumor was located at the periphery, whereas carcinoma is most often found near a large bronchus at the hilum; (2) it had a definite spindle cell structure; (3) the tumor cells lay directly on the endothelium of the blood vessels and vascular spaces; (4) a fine reticulum was found between the individual cells; (5) metastasis to the brain occurred by way of the blood stream. It is further believed that this tumor was primary in the lung because the history, physical examination, and a complete autopsy failed to disclose any other source. It seems probable that the tissue of origin was the stroma of the lung framework.

Summary: In a series of 7,272 autopsies, one case of primary sarcoma of the lung is found, the incidence of this tumor being 0.014 per cent.

In this case, diagnosis of brain tumor was made because of history of progressive paralysis of left

(Continued on page 254)

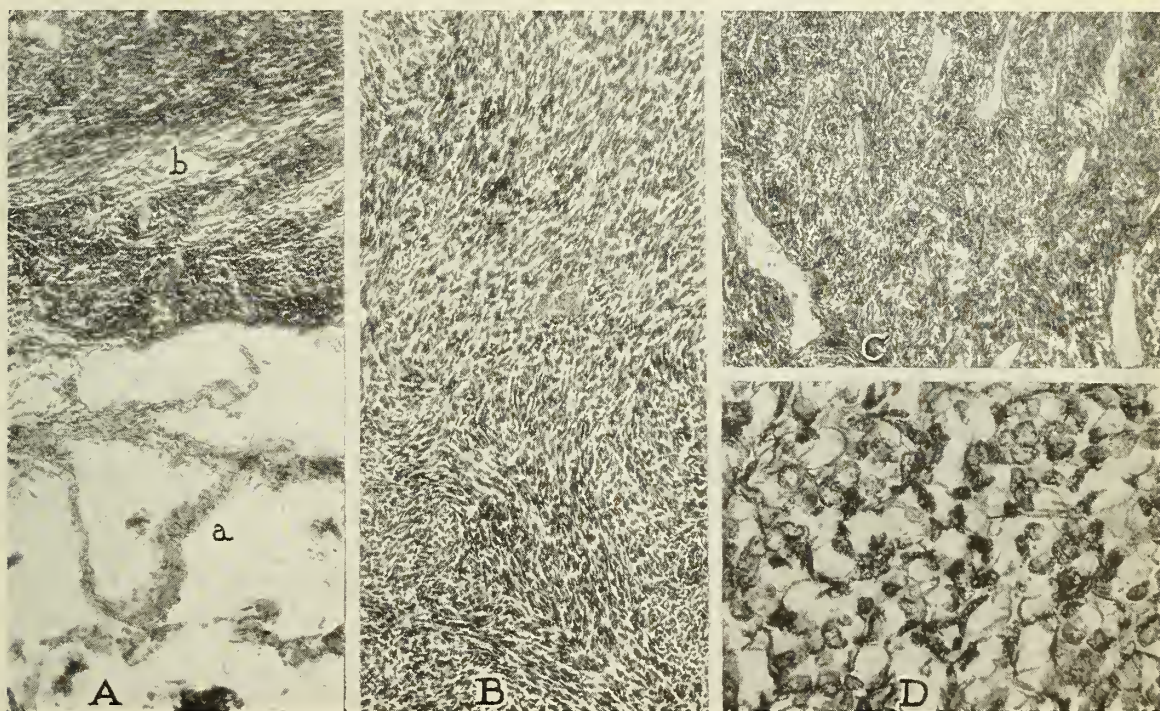


Fig. 2. A. Section of lung: (a) normal lung tissue, (b) sarcoma. (x90). B. Section showing spindle cell architecture of sarcoma. (x90). C. Section showing relation of tumor cells to blood spaces. (x90). D. Section stained by Wilder silver impregnation method showing reticulum between cells. (x450).

## PRESIDENT'S PAGE

To the Members of The Kansas Medical Society:

I would like to speak to you this month in the form of a report to you of a visit I made to the American Medical Association meeting in St. Louis. I visited the American Medical Association meeting many times but it is only twice that I have had the pleasure of an entree to the meeting of the House of Delegates. The House of Delegates is really the official governing body of the Association. It elects the trustees, elects the officers, determines all policies and is really a very powerful influence inasmuch as it speaks for considerably over one hundred thousand doctors. The House of Delegates was actually in session for more than one-half of the time of the meeting in St. Louis. During the hours that it was not in actual session many of its members were engaged in committee meetings or committee hearings on various subjects of vital interest to the profession.

Perhaps the most important committee was the one which conducted the hearing and wrote the report on the Wagner Act. Our state was represented on this very important committee. The report of the committee was brought in late Wednesday afternoon and after considerable discussion passed the House of Delegates without a descending vote. A copy of this report is published in this issue of the Journal and should be read carefully by each and every member. The report officially outlines the policy of the American Medical Association with reference to the very important matters proposed by the Wagner Act. It would be well for every member to inform himself on the attitude of the American Medical Association on this very important subject.

One is impressed by the very earnest interest shown by the members of this House of Delegates. One comes away with a feeling of confidence in the future of the profession because of the careful, deliberate and thoughtful study that is being made by these various committees of the questions which so seriously concern all of us.

I thank the membership of The Kansas Medical Society for an opportunity to have attended two such important sessions as the two I have attended within this last year. May I assure you that your delegates are earnestly and intelligently representing you and the Society. A vote of thanks is due both Dr. Hassig and Dr. Snyder for the very keen interest they are taking in their responsibility as delegates. We must all maintain our interest in the American Medical Association, study the proceedings of the House of Delegates and have confidence in their judgment.

C. C. Nesselrode, M.D.,  
President.



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## EDITORIAL

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### CHARLES H. MAYO, M. D.

The death of Charles H. Mayo last month was mourned by thousands of physicians and patients everywhere who had come under the spell of his kindly personality.

As co-founder of the Mayo Clinic, his name will not be forgotten as long as that famous institution survives. Although his advancing years and ill health had for several years stopped his operative work, many of our readers will recall his sound surgical judgment, honest workmanship, and wide knowledge of surgery.

Although he had been the recipient of so many honors that it requires two galleys of Who's Who to list them all, he remained approachable, kindly and totally unaffected. Dr. Charley was a great doctor and a great man whose life well illustrates what may be accomplished in a land where free enterprise holds sway.

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### ST. LOUIS A. M. A.

The recent meeting of the American Medical Association at St. Louis will be remembered as one of the most successful in its history. The central location contributed in making this a truly representative gathering from all parts of the country.

The outstanding feature was the scientific exhibits which in numbers and interest surpassed all former efforts.

The action of the House of Delegates in going on record as opposing the Wagner Bill will meet with the approval of a majority of the members, since it is the entering wedge of a long range program for government control of medicine. The defeat of this measure will make it necessary for local taxing units to amplify their programs where the care of the medical indigent is inadequate.

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### THE DOCTOR OF THE FUTURE

A young medical graduate recently applied at a university for a fellowship in surgery and was

refused. The real reason for this refusal lay in his having taken a Master's Degree in economics and later turned to the study of medicine. It was considered that he betrayed too great a division of interest to devote whole-hearted concentration to advanced medical study.

This may be an exceptional incident but it illustrates a point of view to be avoided by admission officers of medical schools.

President James P. Conant, of Harvard, has recently proposed that colleges and medical schools acting together should consider the scientific, professional and liberal education of the future doctor. He suggests discarding the old concept of four years scientific and liberal education followed by four years of professional training. In place of this he would regard the whole eight years as a unit with the aim of producing a balanced intellectual diet suitable to each students' talents and interests, in the hope that the goal may be reached of turning out both well trained doctors and educated men.

Modern educational ideals are reflected in President Conant's suggestion. Colleges and medical schools are equally responsible for a lack of definite educational requirements for entrance to medical school. In a desire to shape pre-medical work for acceptance in a medical school, there is a predominating tendency among colleges to crowd in a large number of credits in science solely for the effect upon admission authorities of the medical schools. The scientific courses should depend upon the intention of the student, his aptitude and capabilities.

These factors can be quite accurately estimated early in the college course. If the last two years of high school are taken into account, a still more accurate estimation should be made. The importance of pre-medical education is such that it is not asking too much of educators that a coordination be effected between high school, college and medical school authorities to the end that the student may have the solicitude and guidance which will result in earlier registration in medical schools, with the far less likelihood of failing to meet the qualifications. Under such an arrangement the failures

should be discovered long before the candidate is through college.

It is essential that the future doctor receive an education qualifying him as an educated man as an important part of his preparation for any field of medicine. Otherwise, he will be limited in his usefulness as a citizen and as a doctor. He may be highly trained in the science of medicine and possess fine humanitarian impulses, but if his emotions be not directed by a knowledge of psychology, sociology, economics and other subjects basic to a wide understanding of life, he is likely to be defeated through lack of direction in his effort.

No plan can be set down as the best for the present and future needs in education for the study of medicine. Progress comes from recognizing existing error and inadequacy. The adventure of experimentation must be entered upon for the development of new methods.

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## APPENDICITIS MORTALITY RATE IS CALLED A NATIONAL CHALLENGE

The death rate in the United States from appendicitis is a challenge to the medical profession and the American people, The Journal of the American Medical Association for May 20 declares in an editorial.

It points out that despite adequate knowledge and technic now available, the mortality rate from acute appendicitis has been steadily rising during the past few decades.

The two factors most responsible for the increasing mortality, the significance of which the public should be made to understand, are the increasing use of cathartics for abdominal pain and the delay in the diagnosis and treatment of acute appendicitis. "Both factors are associated when any one goes to a drug store for relief from a 'belly ache' and indulges in catharsis," The Journal states. "This point must be repeatedly emphasized; those with abdominal pain must be warned repeatedly against the dangers of the great American habit of purgation.

"The data illustrating this increasing mortality are not difficult to find," the editorial continues. "The experience of individual states has been particularly striking. For Massachusetts, Reginald Fitz, M.D., Boston, presents data which show a sharply increasing mortality curve from 1908 to 1932. He states that, whereas in 1900 only 243 patients died of acute appendicitis, by 1936 it had risen to 490; there was a higher peak in 1930, when the deaths totaled 610. J. S. Horsley, M.D., Richmond, for the state of Virginia quotes similar statistics; he notes that the death rate from appendicitis rose from 6.4 per hundred thousand in 1913 to 11 in 1930; it was 10.1 in 1935. Startling data have recently been reported by Shepard Krech, M.D., New York, who points out that in six large American cities the mortality rate from appendicitis has increased in one year from 14.3 per hundred thousand in 1935 to 17 in 1936. In one metropolis the rise was more pronounced, from 14.5 to 23.5 deaths per hundred thousand. These figures are from cities having ample hospital facilities and grade A medical schools; obviously these advantages are not being fully utilized.

"H. W. Hudson Jr., M.D., Brookline, Mass., has pointed out that, of every twenty children who die, one dies of acute appendicitis. Indeed, the large proportion of the deaths in this disease unfortunately occur in children and young, healthy adults, a factor which makes the challenge even more alarming. In the entire United States more than 16,000 deaths are recorded as produced by appendicitis in 1936; this is a total 50 per cent greater than all the deaths due to pregnancy and childbirth in the same period. In several communities the problem has been considered important from the public health point of view and vigorous educational campaigns and propaganda have been instituted in order to educate the public to help meet this challenge.

"Appendectomy in itself is associated with a mortality which is practically nil. The deaths which occur from acute appendicitis are found only in those patients in whom a peritonitis has developed from perforation of the appendix.

"Early diagnosis, once the public is educated, lies of course in the hands of the general practitioner.



Early diagnosis is not particularly difficult and if followed by prompt appendectomy results in an almost 100 per cent recovery. Unfortunately, this teaching in recent years has received a setback by the resurrection of the 40 year old Ochsner or delayed operative treatment. This swing of the pendulum has been initiated by surgeons; they have done so, however, only as a method of reducing the high mortality in patients past the stage of early diagnosis and who are already suffering from peritonitis. Unfortunately, this teaching, though applied by surgeons to a relatively limited group of patients, has produced in the minds of many physicians a change of attitude toward treatment of all types of acute appendicitis. There has been a tendency to postpone operative treatment in all cases instead of urging appendectomy promptly after the onset of the disease.

"Hudson found in 100 consecutive admissions for acute appendicitis at the Boston Children's Hospital that only twenty-eight patients were sent to the hospital within twenty-four hours of the onset of pain; significantly all but one recovered rapidly after appendectomy. It was entirely among the remaining seventy-two who entered the hospital more than twenty-four hours after the onset that complications and death occurred.

"Robert Elman, M.D., St. Louis, in a study of peritonitis from ruptured acute appendicitis at St. Louis Children's Hospital, has emphasized that the delayed operation should be reserved for a small group of patients.

"Reports in surgical literature do not change but really reinforce the significance of this teaching. The surgeon when he writes of delayed operation in cases of appendicitis refers only to those with peritonitis, cases in which peritonitis should really never have been permitted to develop. The challenge of appendicitis does not concern the treatment in this group; indeed, it concerns the problem of eliminating this group. When all cases of acute appendicitis are recognized early and operation is performed early, no one need die of the results of this disease. Fitz concludes his current paper before the American College of Physicians with this statement:

"Appendicitis, in spite of being a fashionable and

well studied disease for more than fifty years, continues to slap our faces insultingly. It is easily recognized. Its treatment, on the whole, is satisfactory, yet it continues to kill each year an unnecessary number of people.' "

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## CANCER CONTROL

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### CANCER OF THE BODY OF THE UTERUS AND OF THE FALLOPIAN TUBES\*

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Harold V. Holter, M.D.

Kansas City, Kansas

Adenocarcinoma is the most common malignancy of the body of the uterus because the lining cells are of the columnar type. Occasionally a squamous cell carcinoma occurs, probably arising from the cervix.

The incidence of cancer of the body of the uterus to cancer of the cervix is approximately one to fifteen.

**Etiology.** Cancer of the fundus uteri occurs in the presence of hyperplasia of the endometrium. It is a disease of the menopause, occurring rarely before the thirty-fifth year. There are two factors involved. Chronic irritation undoubtedly plays some part. Endocrine changes enhance cancer development. Erratic cell activity frequently occurs during the hyperplastic changes of the menopause. The endocrines are erratic during the menopause and must influence cell activity.

**Pathologic Types.** The early type is simply the stage beyond endometrial hyperplasia and is superficial.

The advanced type is the unrestrained growth of cancer cells involving the deeper tissues, and later metastasizes to adjacent and distant organs. Clinical grading is dependent upon the degree of involvement of the wall of the uterus and adjacent organs.

**Signs and Symptoms.** Early signs. Since the first growth of cancer of the body of the uterus is in the lining membrane, it usually gives rise to early excessive menstruation, or to spotting between the periods, or both. These are fortunate symptoms. There may be only a serous discharge between periods. The thick wall of the uterus, with its anatomical position, prevents early metastasis. Care-

\*Presented at the 80th Annual Session of The Kansas Medical Society, May 1-4, 1939, Topeka, Kansas.

ful physical and pelvic examination, associated with a history of spotting between periods, or increasing menstrual flow, at or near the menopause, or a recurrence of bleeding after the menopause, may be cancer of the body of the uterus. Cancer of the cervix may be present.

Late signs. Excessive menstruation with metrorrhagia, secondary anemia, cachexia, enlargement of the uterus with parametrial thickening and fixation, pelvic pain or discomfort, foul vaginal discharge; all are signs of advanced cancer.

Treatment. Early cancer. Cancer of the cervix must be ruled out by biopsy, if suspicious. Diagnostic dilatation of the cervix and curettage of the uterus is indicated as early as possible. Frozen microscopic sections by a pathologist present at the curettage may give early information. The curettings of fundic cancer are greyish and friable. Excessive curetting may perforate the uterus. In early cancer, the uterus is freely movable. Microscopic examination will reveal if the curettings are cancer, and may show the gradation of the cancer by the loss of differentiation of the tumor cells. The more malignant cancers show greater anaplasia. Early diagnosis with institution of proper treatment gives excellent hope of cure.

Advanced Cancer. Where the uterus is enlarged and there is parametrial fixation, metastasis has probably occurred. Further diagnostic tests then should be done before radical treatment is instituted. Gastrointestinal x-rays, gall bladder visualizations, cystoscopic, rectal and proctoscopic examinations may be advisable. Intra-uterine instillations of lipiodol, etc., and x-rays following, are not advisable. They may force the cancer cells into the tubes and peritoneal cavity beyond. Uteroscopy is unsatisfactory. Competent men should be called in for the special examinations.

Cancer of the fundus may be associated with polyps and fibroids of the uterus. In case of doubt, diagnostic curettage should be performed. Fibroids, per se, do not bleed after the menopause.

Later Treatment. This divides itself into operative procedures, radium and deep x-ray therapy.

Operation. If cure is to be obtained, the operation must be a radical procedure. Before entering the abdomen, the vagina should be cleansed and an antiseptic applied to the cervix, a small iodoform strip inserted within the cervical canal, and the external os of the cervix closed with catgut sutures. Abdominal operation consists in performing a panhysterectomy (uterus and cervix), with removal of both tubes and both ovaries, with wide broad ligament removal. To prevent squeezing cancer cells laterally, uterine traction forceps should not

be used. Elevation of the uterus should be obtained by round ligament traction. If the cancer has metastasized too far, this procedure may be inadvisable. Severe hemorrhage may occur, or a viscus may be ruptured. Partial operation may then be the operation of choice. This may relieve some future pain and pressure symptoms. Surgical judgment must be exercised in the individual case.

Radium and Deep X-ray Therapy. Proper therapy must be determined by consultation with a competent radiologist. It may be advisable to precede the abdominal operation by the use of intrauterine radium, or deep x-ray therapy. This is given to prevent broad ligament and lymphatic spread. It is also of value in those cases which are physically unfit to undergo major operative procedures at the time of the curettage. The radical operation may be postponed with benefit for three or four weeks, while the patient is treated by tonics, blood transfusions, etc.

Postoperative X-ray Therapy. All cases of body cancer should have deep x-ray therapy to the pelvis following the major operative procedure. This should be given by a competent x-ray therapist. Considerable judgment must be exercised in determining when these treatments should be started. Rapidly convalescing patients may be given x-ray therapy earlier than those who have convalesced poorly. The patient's general condition must determine the x-ray dosages. The tissue resistance of the normal cells helps prevent cancer cell spread. The normal tissue cell is less resistant for a time following a major operative procedure. More harm than good may be done by too early or too massive doses of roentgen therapy. Some patients tolerate x-ray treatment with little discomfort, have little nausea, and their digestion is little affected. Other patients receive a terrific reaction, their digestive processes and nutrition are markedly affected. If the x-ray therapist does not take these factors into consideration, he may bring about an early termination to an otherwise hopeful case. Close observation of the patient by the physician and consultant will help prevent such an occurrence.

Inoperable cases. Intrauterine radium and x-ray therapy is advisable. The patient's life will usually be prolonged, the spread of the growth will be less rapid, and there will be less pain from metastases. The final days or weeks will be made more comfortable, if discretion is used in the dosage, and if proper nutrition is maintained by the various methods.

Deep X-ray Therapy. The pelvic cycle of deep x-ray therapy is administered by cross-firing the pelvis from four to six ports designed to deliver 600 R units to the tumor. The 600 R units are



measured at the cervix, fractionated according to the ability of the patient to receive them. This is usually done in from twelve to eighteen treatments, usually given every day. The German method of treatment consists in giving 650 R units at each of four to six ports, measured at the skin. These treatments are given in four days.

**Radium Treatments.** The Gamma rays are the beneficial rays. The Alpha rays are easily filtered out. The Beta rays are filtered out by one millimeter of platinum or its equivalent. The dosage of intra-uterine radium must be determined by the radiologist. Radon is the emanation pumped from radium in solution. Radon seeds may be used in place of radium.

**Prognosis.** The prognosis in body cancer is better than that in cervical cancer. Early diagnosis with radical operative procedure, followed by deep x-ray therapy, gives fifty per cent or more five years' survivals.

### SARCOMA OF THE BODY OF THE UTERUS

Sarcoma of the body of the uterus is a rare condition. It commonly arises in association with fibroids of the uterus, usually in degenerating fibroids. It occasionally arises in the connective tissue of the endometrium. It is important that histologic study of fibroid tumors be made after operation. Polypoid masses from the uterus should also be examined for malignancy.

Symptoms, diagnosis and treatment are practically the same as those of cancer of the body of the uterus, as previously given.

### CHORIONEPITHELIOMA OF THE BODY OF THE UTERUS

Choriocancer of the body of the uterus is one of the most malignant of all cancers. It is not uncommon.

**Etiology and Diagnosis.** It arises from the fetal cells covering the chorionic villi. Most chorionepitheliomas are preceded by hydatid moles. Abortion, miscarriage or term pregnancy may precede it. Any case which has shown hydatidiform mole degeneration should periodically be checked. Any abnormal bleeding should cause alarm. The Friedman test should be done and repeated later if negative. This biologic test shows the increase of Prolan A Hormone. Diagnostic curettage should be done. Choriocancer metastasizes early to the vagina, and by the blood stream to the lung.

Treatment must be early if cure is to be obtained. The treatment must be radical. It is the same as that given under Cancer of the Body of the Uterus.

**Prognosis.** Early diagnosis with radical surgery

and later deep x-ray therapy gives cure of about fifty per cent of cases. Patients with lung metastasis usually die early. However, cases of cure are reported with lung metastasis after removal of the primary tumor. A survival of two years usually means a cure.

### CANCER OF THE FALLOPIAN TUBES

Primary cancer of the Fallopian tubes is rare. Sarcoma arising from the connective tissue elements may be primary, but is also rare. Secondary cancer, sarcoma, or chorionepithelioma may occur. They are usually secondary to a primary malignancy of the uterus. Chorionepithelioma of the tubes has been reported following tubal pregnancy.

**Diagnosis.** There are no distinctive signs of malignancy of the tube. Pain is present early, due to the distention of the lumen of the tube, and is increased by spread to surrounding tissues. There may be an intermittent discharge of sero-sanguineous vaginal discharge. There may be menstrual disturbances. On pelvic examination there is a tense fixed, or partially fixed mass in the region of the adnexae. Ascites is a late symptom from peritoneal involvement.

**Treatment.** The treatment is radical, as given under Cancer of the Body of the uterus.

**Prognosis.** Cancer of the tube is very malignant, and the prognosis is poor. Occurrences usually take place within the first year after the operation.

## EYE, EAR, NOSE & THROAT

### THE PRACTICAL USE OF HOMATROPIN-PAREDRIENE CYCLOPLEGIA\*

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Lawrence, Kansas  
and

Marshall E. Hyde, M.D.

Osawatomie, Kansas

The following observations are presented from one of a series of studies being conducted at the Osawatomie State Hospital on cycloplegia and the effect of various drugs used for the production of cycloplegia and mydriasis.<sup>1,2,3,4,5</sup> This report is submitted on the action of homatropin hydrobromide two per cent aqueous solution used in combination

\* From the Department of Ophthalmology, Osawatomie State Hospital, Osawatomie, Kansas.

with paredrine hydrobromide one per cent solution.\*\*

Paredrine is the parahydroxy derivative of benzedrine. Pharmacologically the two compounds behave similarly with respect to their peripheral action. Both are essentially adrenergic in their effect.

### PROBLEM

1. To observe and record the action of homatropine and paredrine when used in combination for the production of cycloplegia.

2. To observe and record the effect of eserine salicylate one per cent tear isotonic solution on the cycloplegia produced by homatropine and paredrine.

### PATIENTS

Twenty physically healthy patients aged sixteen to thirty years.

### MATERIAL USED

1. Homatropine hydrobromide two per cent solution.

2. Paredrine hydrobromide one per cent solution (three per cent boric acid.)

3. Eserine salicylate one per cent tear isotonic solution.\*\*\*

4. Pontocain one-fourth per cent solution.\*\*\*\*

5. Flashlight.

6. Prince rule.

7. Jaeger test type.

8. Millimeter ruler.

9. Bailliant tonometer.

The following points were observed and recorded at time intervals as indicated:

1. Visual acuity.

2. Reaction of the pupil to light and accommodation.

3. Size of the pupil.

4. Ability to read Jaeger test type.

5. Accommodation as determined by Prince rule.

6. Intra-ocular tension as determined by Bailliant tonometer.

### PROCEDURE

Technique of drug administration: Homatropine hydrobromide two per cent aqueous solution gtt. two were twice instilled in each eye of each patient included in the group. This was followed by two similar instillations of paredrine hydrobromide one per cent solution. For example: A patient received homatropine gtt. two in each eye at 1:30 and again 1:35 p.m. This was followed by paredrine gtt. two in each eye at 1:40 and again at 1:45 p.m.

The previously mentioned observations were made

and recorded prior to drug administration and one-half hour, one hour, two hours and four hours following drug administration. The optimum time for refraction, as determined by previous experiments, was found to be one hour following the first drop of homatropine.

The state of cycloplegia was determined, first, by retinoscopy with fixation in the distance. This was compared with retinoscopic findings with fixation at thirty inches. (Marked discrepancy in these findings indicate lack of complete cycloplegia.) Next, the trial case refraction for distance was determined and with this before the patient accommodation was checked with the Prince rule. And finally, the degree of cycloplegia was estimated by placing a +300 D. sphere before the distance correction and checking the far point at 33 centimeters.

One-half hour was allowed for refraction. At the end of this time or one and one-half hours following the first drop of homatropine instilled, eserine salicylate one per cent tear isotonic solution was administered. This was repeated in fifteen minutes. Observations were continued and recorded until the end of the fourth hour.

### COMMENTS ON RESULTS

1. On the size of the pupil: Uniform, marked dilatation of the pupil was obtained in all patients. This reached a maximum one hour following the administration of homatropine and paredrine and was still present at the end of two hours. (The cornea was clearer and more lustrous than when "homatropine alone" was used.)

2. On the reaction of the pupil to light: Pupils were uniformly active to light and accommodation prior to drug administration. They were likewise uniformly inactive to light following homatropine-paredrine administration and remained so until after the administration of eserine.

3. On the change in accommodation: Complete practical cycloplegia was obtained one hour following homatropine and paredrine administration in all patients. There was a complete return of accommodation in the entire group of twenty patients within one-half hour following the administration of eserine and maintenance of this return of accommodation without evidence of diminuation for two hours following eserine administration.

4. On the change in intraocular tension: Twelve cases exhibited a slight decrease in intraocular tension following homatropine-paredrine administration. Eight cases remained the same as before dilatation. Due to the slight change exhibited and the small number of cases no significance is attached to these findings.

\*\* Smith, Kline and French Co., Philadelphia, Pennsylvania.

\*\*\* Associated Physicians' Laboratory, San Francisco, California.

\*\*\*\* Winthrop Chemical Co., New York, New York.



## SUMMARY

Homatropin hydrobromide two per cent aqueous solution and paredrine hydrobromide one per cent solution (three per cent boric acid) used in combination as described above served as an efficient method for the production of cycloplegia in a group of twenty patients between the age of sixteen and thirty years. Each patient was ready for refraction one hour following administration of homatropine and paredrine. The cycloplegia produced by these drugs was completely overcome in one-half hour by two separate instillations of eserine salicylate one per cent tear isotonic solution.

## BIBLIOGRAPHY

1. Powell, Lyle S. and Hyde, M. E.: The Effect of Benzedrine Sulfate Solution on Cycloplegia, *Journal of The Kansas Medical Society*, January 1938, 39:1:1-4.
2. Powell, Lyle S. and Hyde, M. E.: Observations on Action of Eserine Administration During Homatropine-Benzedrine Cycloplegia, *Journal of The Kansas Medical Society*, February, 1938, 39:2:57-59.
3. Powell, Lyle S.: The Practical Use of Homatropin-Benzedrine Cycloplegia, A Further Report, *Transactions American Academy of Ophthalmology and Otolaryngology*, 1938.
4. Powell, Lyle S., and Hyde, M.E.: Observations on the Action of Benzedrine Sulfate Ophthalmic Solution Used Alone in the Production of Mydriasis, *Journal of The Kansas Medical Society*, October, 1938, 39:10:434-5.
5. Powell, Lyle S. and Hyde, M. E.: Observations on the Action of Paredrine Hydrobromide Ophthalmic Solution Used Alone in the Production of Mydriasis, *Journal of The Kansas Medical Society*, November, 1938, 39:11.

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## TUBERCULOSIS CONTROL

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The following extracts from an article by Dr. S. Roodhouse Gloyne, Pathologist, The London Chest Hospital, appeared in the May 1939 issue of the Pamphlet, *Tuberculosis Abstracts*, issued monthly by the National Tuberculosis Association:

### THE CYTOLOGY OF SPUTUM

We are all apt to assume that everything that goes into a sputum flask is sputum. Saliva, postnasal and pharyngeal secretions which have trickled down the throat, even gastric contents resulting from retching may be confused with true sputum. The word will be taken here to mean the material which coughing ejects from the respiratory passages. Cytological examination often enables us to determine (a) from what part of the respiratory tract the secretion comes and (b) what its nature is.

Specimens should be as fresh as possible, because cells degenerate more quickly than bacteria and a stale specimen is valueless for cytological purposes. The next thing is to select suitable portions for examination. There is only one safe rule, viz., to select every portion which looks different in appearance from any other portion—mucoid, purulent, pigmented, blood stained, gelatinous, etc. The pur-

ulent portion is the least useful. The specimen may be poured into a wide dish (e.g. an ordinary bacteriological petri-dish) and placed on a light or dark background as required. It is not enough to take a wild plunge at an evil-smelling specimen with a platinum loop and to trust to luck. Each portion should be picked out with sterile forceps, and placed upon one end of a slide. A thin film is then made with the edge of another slide in the same way that one spreads a blood film for malaria parasites. In selecting the portions it is a good plan to go over the specimen carefully first with a hand lens. The technique used by the writer for staining films is a modification of that of Dudgeon and Wrigley:—(1) Fix wet films in Schaudinn's solution (absolute alcohol, one part, saturated aqueous solution of perchloride of mercury, two parts, with three per cent acetic acid added immediately before use) for five minutes. (2) Pour off fixative and cover with 0.5 per cent iodine in seventy per cent alcohol for two to three minutes. (3) Drain off this solution and cover with the following solution for two to three minutes: Sodium thiosulphate, 7.5 gm.; 96 per cent alcohol, 100 c.c.; distilled water, 450 c.c. (4) Wash and stain with undiluted Delafield's hematoxylin for two to three minutes. (5) Pour off stain and differentiate with 1.0 per cent hydrochloric acid. (6) Counterstain with Biebrich's scarlet or orange G. (7) Dehydrate with absolute alcohol, clear with xylol and mount in neutral balsam.

The cells encountered may be classified into three groups (1) cells which have migrated from the blood stream; (2) tissue cells from various portions of the respiratory tract; (3) abnormal cells resulting from various types of growth.

The cells of the first group are leucocytes and erythrocytes and they are found in practically all sputa. The neutrophil polymorphonuclear cell is an essential part of the tissue response in all suppurative diseases of the lung. It is fundamentally a phagocyte and frequently contains organisms. After lipiodol administration it will show engulfed oil droplets also. The predominance of the lymphocyte, which is such a useful diagnostic sign of tuberculosis in other exudates, is in the writer's view quite valueless in sputum. Lastly there is the eosinophil cell commonly found in asthma. Of the tissue cells, the commonest is the transitional squamous cell which covers the anterior surface of the epiglottis, the upper half of the posterior surface, the aryo-epiglottic folds and vocal cords and the pharynx. This cell is generally found in association with large numbers of the organisms of the catarrhal infections. A cytological picture of this kind is common in the chronic catarrhs of the winter months.

The ciliated columnar cell of the epithelium of the respiratory tract extends from the trachea down to the small bronchi and may desquamate and appear in the sputum when the mucosa is ulcerated. It is often seen after the passage of a bronchoscope. The lining cells of the respiratory bronchioles and alveolar ducts are of a low cuboidal non-ciliated type and they are not easy to distinguish from other mononuclear cells in sputum unless they are adhering together in plaques. None of the cells in this group is a phagocyte. There is, however, a cell, conveniently considered here, which does phagocyte, i.e. the macrophage. It masquerades under many names, the heart failure cell, the dust cell, etc., but is really part of the reticulo-endothelial system and is an expert phagocyte. It is found in pulmonary tuberculosis, the pneumoconioses, chronic congestive failure and pulmonary edema, and may contain tubercle bacilli, carbon pigment, red blood cells or hemoglobin pigment, as the case may be. The refractile particles of quartz or asbestos found in the pneumoconioses cannot be seen in the ordinary stained specimen.

With regard to the third group, excluding the hepatic cells of ruptured liver abscess and the lymphadenoma cell of Hodgkin's disease which the writer has only seen in sputum on one or two occasions, the cells of this group are neoplastic. In the case of secondary growths of the lung, any form of cell which is found in the primary growth may, of course, appear in the sputum, but in the primary malignant growths of the lung the cells are for practical purposes of two kinds only, the oat-cell carcinoma and the squamous carcinoma cell. The oat-cell carcinoma is generally associated with a primary massive growth of the mediastinal glands and although this growth exerts great pressure on the main bronchi, it does not as a rule ulcerate and break down. The oat-cell, therefore, is not commonly found in sputum. Moreover, it is difficult to differentiate from granulation tissue cells and fibroblasts from the bronchial wall. This cell, therefore, should be diagnosed with the very greatest circumspection.

The squamous carcinoma cell is derived from bronchial growths. It is not sufficiently realized that bronchial carcinoma breaks down into cavity with even greater regularity than a tuberculous lesion. A single pulmonary abscess developing insidiously in a person of middle age without obvious cause is more likely than not to be a breaking down bronchial carcinoma. This cell can be found readily in the sputum but must be carefully distinguished from the normal transitional squamous cell of the upper respiratory tract. It is usually found adhering

to its neighbors in small plaques, the individual cells of which exhibit marked diversity of form and size. In the early stage of its growth the cell shows a rounded nucleus with an open chromatin network, a large nucleolus, and a more or less clear cytoplasm with a cell envelope attached to its neighboring cell along the contiguous border, and prickle-cell arrangement. As the cell develops, vacuolation takes place and the nucleus is pushed to one side until it eventually comes to occupy a position near the cell envelope and is squeezed into a horseshoe shape. Keratinisation of the cell follows and the cytoplasm stains darker in consequence. All these stages may be found in the different cells of one plaque, and when keratinisation occurs it is possible to identify individual squamous carcinoma cells irrespective of plaque formation. Cell nests are rarely found in sputum films. The carcinoma cell does not phagocyte—a cardinal point in distinguishing it from the macrophage with which it is very easily confused in the early stage of neoplastic growth.

Space does not permit of a description of wet films and of frozen and paraffin sections, but the stained film method outlined above will amply repay careful study. It is possible thus to make a diagnosis of asthma, bronchial ulceration and chronic pulmonary edema, whilst it is of the greatest value in detecting bronchial carcinoma and will even enable one sometimes to gain corroborative evidence of pulmonary tuberculosis. The broad way to failure is to take the first portion of sputum which presents itself; the straight and narrow way to success is to go over the specimen with a hand lens and select the particles for examination with discrimination. *Experientia docet.*

#### PRIMARY SARCOMA OF THE LUNG

(Continued from page 245)

arm, with focal convulsive seizures, and x-ray finding of pineal body shift.

Autopsy showed a large primary tumor mass under the pleura of the right lung, a small metastatic nodule in a hilar lymph gland, and another in the right cerebral hemisphere.

Microscopic study of all the tumor masses showed the typical structure of a spindle cell sarcoma.

#### BIBLIOGRAPHY

1. Adler, I.: *Primary Malignant Growths of the Lungs and Bronchi*, New York, 1912.
2. Ball, H. A.: "Primary Pulmonary Sarcoma", *American Journal of Cancer*, (supp.) 15:2319, July, 1931.
3. Baum, O. S., Richards, J. H., Ryan, M. D.: "A Case of Atelectasis of the Right Lower and Middle Lobes with Bronchoscopy Demonstrating Spindle Cell Sarcoma of the Right Main Bronchus", *Annals of Internal Medicine*, 12:699, November, 1938.
4. Ewing, J.: *Neoplastic Diseases*, Philadelphia, 1928.



5. Fedoroff, S. P.: "Ein operierter Fall von Lungensarkom", *Zentralblatt für Chirurgie*, 57:707, 1930.
6. Graham, E. A., Singer, J. J., Ballou, H. C.: *Surgical Diseases of the Chest*, Philadelphia, 1935.
7. Herzmann, K.: "Über einen Fall von solitärem Spindelzellsarkom der Lunge bei einem 11 jährigen Mädchen", *Keitschrift für Kinderheilkunde*, 59:236, 1937.
8. Johns, E. P., Sharpe, W. C.: "Primary Pulmonary Sarcoma", *American Journal of Cancer*, 23:45, January, 1935.
9. Lyssunkin, I. I.: "Über primäre Pleura und Lungensarkome", *Frankfurter Zeitschrift für Pathologie*, 46:107, 1933.
10. Roberts, O. W.: *Case Report Lancet*, 1:917, April 25, 1931.
11. Rosenblum, P., Gasul, B.: "A Case of Primary Sarcoma of the Lung in an Infant Twenty-nine Months of Age", *Archives of Pediatrics*, 48:63, January, 1931.

## NEWS NOTES

### OSTEOPATHS

The Kansas State Osteopathic Association filed an action in the Federal District Court on May 5 requesting that Mr. Wm. H. Burke, Collector of Internal Revenue be directed to issue narcotic stamps to osteopaths for 1939-40. This action followed a refusal by the Federal Division of Narcotics to issue additional stamps to Kansas osteopaths. In the first hearing of the case held in Kansas City, Kansas, on June 5, Judge Richard L. Hopkins issued a temporary restraining order against the collector of Internal Revenue pending the preparation of additional briefs and arguments in the case.

The Collector of Internal Revenue represented by Mr. S. S. Alexander, United States District Attorney, filed a brief at the above hearing and the osteopaths were given until June 15 to file their brief. After that time, Judge Hopkins may dissolve the temporary restraining order; may issue a permanent injunction in favor of the osteopaths; or may continue the case for further arguments. Mr. Alexander served notice following the issuance of the temporary order that appeal on this phase of the case would be taken immediately to the United States Circuit Court of Appeals.

Foremost point in the case is the legal construction to be placed on the word "remedial". It has been generally held, that a person to obtain a narcotic stamp in a particular state, must be privileged to issue and dispense drugs under the laws of that state. The Kansas Supreme Court in the case of *State vs. Gleason*, 148 Kan. 1 held that an osteopath can not utilize drugs and narcotics and drug therapy "insofar as such drugs are given as remedial aids". The osteopaths are claiming that narcotics are palliative drugs as distinguished from remedial drugs. The contention of the government is that narcotics are within the usual definition of the term "remedial"—to cure or to relieve.

### APPOINTMENTS

Governor Payne H. Ratner recently announced the following appointments to the Kansas State Board of Health and the Kansas Board of Medical Registration and Examination:

Kansas State Board of Health  
 R. W. Urie, M. D., Parsons.  
 H. L. Aldrich, M. D., Caney.  
 G. A. Leslie, M. D., McDonald.  
 J. F. Gsell, M. D., Wichita.  
 G. I. Thacher, M. D., Waterville.

R. T. Nichols, M. D., Hiawatha.  
 J. L. Lattimore, M. D., Topeka.  
 J. T. Reid, M. D., Iola.  
 W. C. Lathrop, M. D., Norton.  
 Mr. W. E. Scott, Kansas City, attorney member.

Kansas Board of Medical Registration and Examination

J. F. Hassig, M. D., Kansas City.  
 C. E. Joss, M. D., Topeka.  
 J. E. Henshall, M. D., Osborne.  
 O. L. Cox, M. D., Iola.

Since all positions on the Kansas State Board of Health were subject to appointment, the above list represents the present membership of that Board.

The Kansas Board of Medical Registration and Examination, now consists of the above appointments and the following persons: H. E. Haskins, M. D., Kingman; M. C. Ruble, M. D., Parsons, and F. S. Hawes, M. D., Russell.

Both boards will hold meetings during the month of June.

### LOCATION

The Elk County Medical Society advises that an excellent location for a physician is available at Longton.

Longton is a town of approximately 700 people in Elk County and no physician is located there at the present time.

### STATE REORGANIZATION

The new laws passed by the legislature pertaining to reorganization of state functions and including supervision of state medical institutions, were recently placed in effect.

The State Sanatorium for Tuberculosis at Norton, Topeka State Hospital, Larned State Hospital, the Osawatimie State Hospital and the State Hospital for Epileptics at Parsons, are now under the supervision of the Kansas State Board of Social Welfare. These institutions were formerly supervised by the Kansas State Board of Administration.

The State School for the Blind at Kansas City and the State School for the Deaf at Olathe are now under the supervision of the State Board of Regents. These institutions were also formerly supervised by the Board of Administration.

### BOARD OF REGENTS

Dr. H. L. Snyder, Winfield, was recently appointed as a member of the Kansas Board of Regents by Governor Payne H. Ratner. Dr. Snyder will serve a three-year term.

### PORTER LECTURE

The University of Kansas School of Medicine presented the ninth Porter Lectureship in Medicine at Kansas City and Lawrence on April 18 and 19. The lecturer was Dr. Homer W. Smith, professor of physiology, New York University, New York City. His subjects were: "Newer Methods of Study of Renal Function in Man," "Evolution of the Kidney", and "Physiological Control of Renal Blood Flow."

The Porter Lectureship was made possible by Dr. J. L. Porter of Paola who in 1918 bequeathed to the University of Kansas School of Medicine, a sum of money for the stimulation of medical scholarship and research. A portion of this fund is used annually to provide a post-graduate course for physicians.

### WAGNER BILL

One of the foremost activities of the House of Delegates of the American Medical Association at its meeting in St. Louis on May 15-19 pertained to consideration of the Wagner Bill now pending in Congress. A reference Committee appointed by the House of Delegates, held numerous hearings on the measure which were attended by representatives of the various state medical societies, by hospital groups, and other agencies. After completion of the hearings and discussions, the Reference Committee recommended the following resolution to the House of Delegates which was unanimously adopted by that body:

"Your reference Committee has carefully considered the Bill designated as S-1620, 'A Bill to provide for the general welfare by enabling the several states to make more adequate provision for public health, prevention and control of disease, maternal and child health services, construction and maintenance of needed hospitals and health centers, care of the sick, disability insurance, and training of personnel; to amend the Social Security Act; and for other purposes.'

This bill was introduced by Senator Robert A. Wagner of New York, February 28, 1939, and is commonly referred to as the Wagner Health Bill. The bill itself provides that, if it be enacted, it may be cited as the 'National Health Act of 1939.' The purposes of the bill are sufficiently stated in the title, but the bill itself must be recognized as a proposed amendment to the Social Security Act of 1935. The bill is intended to make effective a national health program recommended by the Interdepartmental Committee to coordinate health and welfare activities.

The House of Delegates of the American Medical Association at its special session in Chicago, September 16, 1938, considered the National Health Program and adopted resolutions based on five recommendations contained in the program. It is important that this fact be borne in mind, for the bill, which drafted long after these resolutions were adopted and at a time when the resolutions were presumably known to the proponents of this measure, does not recognize either the spirit or the text of these resolutions. Any criticism of this bill by the Association is not to be construed, therefore, as a repudiation of any of the principles adopted by the 1938 Special Session of the House of Delegates.

### ANALYSIS OF THE BILL

S. 1620 proposes to amend Title V. of the Social Security Act—Grants to States for Maternal and Child Welfare—and Title VI—Public Health Work and Investigations—and proposes to add to the Social Security Act certain new titles: namely, Title XII—Grants to States for Hospital and Health Centers; Title XIII—Grants to States for Medical Care, and Title XIV—Grants to States for Temporary Disability Compensation.

Already some individuals and organized groups in the United States have appeared before the Senate Subcommittee which has this bill under consideration and have urged its immediate enactment. Although the stated ob-

jectives of the Wagner Health Bill are generally recognized as desirable, your committee cannot approve the methods by which these objectives are to be attained.

Repeatedly, physicians and all other qualified professional groups have recommended the coordination and consolidation of the health activities of the Federal Government. The Wagner Health Bill leaves existing and proposed preventive and curative medical services widely scattered through several federal agencies.

This bill does not in any way safeguard the continued existence of the private practitioners who have always brought to the people the benefits of scientific research and treatment.

It does not provide for the use of the thousands of vacant beds now available in hundreds of church and community general hospitals.

The Wagner Health Bill proposes an extensive program in the field of 'health, diagnostic, and treatment centers, institutions and related facilities,' without defining their functions.

This bill proposes to make federal aid for medical care the rule rather than the exception, since it does not specifically limit its benefits to persons unable to pay for adequate medical care.

The Wagner Health Bill does not recognize the need for suitable food, sanitary housing and the improvement of other environmental conditions necessary to the continuous prevention of disease and promotion of health.

This bill insidiously promotes the development of a complete system of tax supported governmental medical care, thus undermining and debasing present standards of medical services.

The House of Delegates in September 1938 urged compensation for the loss of wages during sickness. The Wagner Health Bill deviates from this suggestion by proposing to provide medical services in addition to compensation.

The Wagner Health Bill would authorize an enormous expansion of governmental medical services and therewith ultimately unlimited appropriations for its health program. The funds necessary would be so great as to increase still further the present burdensome general taxation.

The Wagner Health Bill provides for supreme federal control. Rules and regulations must be promulgated by the Chief of the Children's Bureau in the Department of Labor, the Surgeon General of the Public Health Service, the Federal Emergency Administrator of Public Works, and the Social Security Board. These federal agents are given authority to disapprove plans proposed by the individual states.

The House of Delegates at its September 1938 Session approved the expansion of preventative and other medical services when the need could be shown. The Wagner Health Bill prescribes no method for determining the nature and extent of the needs for which it proposes allotments of funds.

The provisions in the Wagner Health Bill that have never been considered by the House of Delegates are: the authorization of appropriations for studies, investigations and demonstrations, and the creation of federal and state advisory councils.

The Wagner Health Bill, as judged by the considerations that have been here presented, is inconsistent with the fundamental principles of medical care established by years of scientific professional medical experience, and in the opinion of your committee it is, therefore, contrary to the best interests of the American people.



For years the health of the people of the United States, as measured by sickness and death rates, has been better than that of most foreign countries, and this improvement has been continuous. The fortunate health conditions in the United States cannot be disassociated from the standards and methods of medical practice that have prevailed under the present system of medical practice.

No other profession and no other organization has done more for the prevention of disease, the promotion of health and the care of the sick than have the medical profession and the American Medical Association. No other groups have shown more genuine sympathetic interest in human welfare.

The contribution of the individual members of the American Medical Association to medical care is universally regarded as monumental in total volume. The contribution of the American Medical Association, through a program of medical education and the activities of its numerous councils which safeguard medical services, give abundant proof of interest in the problems of the national health. It has given continued consideration to these problems, whereas others show concern with these proposals because of a present but, it is to be hoped, a temporary need for relief. These are the groups which request revolutionary legislative action as indispensable for the extension and further diffusion of health facilities.

In view of its record and in consideration of the responsibility which American social history and the nature of medical care have imposed on the medical profession, the American Medical Association would fail in its public trust if it neglected to express itself unmistakably and emphatically regarding any threat to the nation's health and well-being.

The American Medical Association must therefore, speaking with professional competence, oppose the Wagner Health Bill.

Nevertheless, recognizing the soundness of the principles stated in the resolutions adopted by the House of Delegates at its special Session in 1938, namely, the expansion of preventive medicine and public health where need can be shown, the extension of medical care for the indigent and the medically indigent where the need can be demonstrated, with local determination of needs and local control of measures to supply these needs, your committee would urge the development of a mechanism for meeting these needs within the philosophy of the American form of government and without damage to the quality of medical services.

This question, as it relates to the aid to be given by an individual state to its own counties, municipalities or other local political units, is not immediately before this Association. The answer is to be found in the individual state constitutions and state statutes. Counties, townships and municipalities are creatures of the individual states and can be molded and guided by the state for its own purpose. The individual state, itself, is not a creature of the Federal Government. The Federal Government is, as a matter of fact, a creature of the individual states.

The fundamental question is how and when a state should be given financial aid by the Federal Government out of the resources of the states as a whole, pooled in the Federal Treasury. Disasters, such as floods, dust storms, fire and epidemics, have long been recognized as justifying such Federal aid. No state or person has ever been heard to object to the use of funds out of the Federal Treasury for such purposes. No one has ever proposed, however, that because Federal aid is extended under such conditions to a state in distress, a corresponding aid must be extended

to every other state, regardless of its need. Nor has anyone ever been heard to say that Federal aid to a state in distress, because of flood, dust storm, fire or epidemic, shall not be extended, unless and until the suffering state has produced from its own treasury a stated amount of money to aid in affording the relief. The development of such bizarre thinking may be traced to those who have originated within comparatively recent years the granting of Federal subsidies—sometimes referred to as 'grants in aid'—to induce states to carry on intrastate activities suggested frequently in the first instance by officers and employees of the Federal Government. The use of Federal subsidies to accomplish such federally determined activities has invariably involved Federal control. Any state in actual need of financial aid from the Federal Government for the prevention of disease, the promotion of health and the care of the sick should be able to obtain aid in a medical emergency without stimulating every other state to seek and to accept similar aid and thus to have imposed on it the burden of Federal control.

The mechanism by which this end is to be accomplished, whether through a Federal Agency to which any state in need of Federal financial assistance can apply, or through a new agency created for this purpose or through responsible officers of existing Federal Agencies, must be developed by the Executive and the Congress who are charged with these duties. Such method would afford to every state an agency to which it might apply for Federal assistance to enable it to care for its own people without involving every other state in the Union or the entire government in the transaction, and without disturbing permanently the American concept of democratic government.

#### SUMMARY

1. The Wagner Health Bill does not recognize either the spirit or the text of the resolutions adopted by the House of Delegates of the American Medical Association in September 1938.

2. The House of Delegates cannot approve the methods by which the objectives of the National Health Program are to be obtained.

3. The Wagner Health Bill does not safeguard in any way the continued existence of the private practitioners who have always brought to the people the benefits of scientific research and treatment.

4. The Wagner Health Bill does not provide for the use of the thousands of vacant beds now available in hundreds of church and community general hospitals.

5. This Bill proposes to make federal aid for medical care the rule rather than the exception.

6. The Wagner Health Bill does not recognize the need for suitable food, sanitary housing and the improvement of other environmental conditions necessary to the continuous prevention of disease.

7. The Wagner Health Bill insidiously promotes the development of a complete system of tax supported governmental medical care.

8. While the Wagner Health Bill provides compensation for loss of wages during illness, it also proposes to provide complete medical service in addition to such compensation.

9. The Wagner Health Bill provides for supreme federal control; federal agents are given authority to disapprove plans proposed by the individual states.

10. The Wagner Health Bill prescribes no method for determining the nature and extent of the needs for pre-

ventive and other medical services for which it proposes allotments of funds.

11. The Wagner Health Bill is inconsistent with the fundamental principles of medical care established by scientific medical experience and is therefore contrary to the best interests of the American people.

12. The fortunate health conditions which prevail in the United States cannot be disassociated from the prevailing standards and methods of medical practice.

13. No other profession and no other group have done more for the improvement of public health, the prevention of disease and the care of the sick than have the medical profession and the American Medical Association.

14. The American Medical Association would fail in its public trust if it neglected to express itself unmistakably and emphatically regarding any threat to the national health and well being. It must, therefore, speaking with professional competence, oppose the Wagner Health Bill.

15. The House of Delegates would urge the development of a mechanism for meeting the needs for expansion of preventive medical services, extension of medical care for the indigent and the medically indigent, with local determination of needs and local control of administration, within the philosophy of the American form of government and without damage to the quality of medical service.

16. The fundamental question is how and when a state should be given financial aid by the Federal government out of the resources of the states as a whole, pooled in the Federal Treasury.

17. The bizarre thinking which evolved the system of Federal subsidies—sometimes called 'grants-in-aid'—is used to induce states to carry on activities suggested frequently in the first instance by officers and employees of the Federal government.

18. The use of Federal subsidies to accomplish such Federally determined activities has invariably involved Federal control.

19. Any state in actual need for the prevention of disease, the promotion of health and the care of the sick should be able to obtain such aid in a medical emergency without stimulating every other state to seek and to accept similar aid, and thus to have imposed on it the burden of Federal control.

20. The mechanism by which this end is to be accomplished, whether through a Federal agency to which any state in need of Federal financial assistance can apply, or through a new agency created for this purpose or through responsible officers of existing Federal agencies, must be developed by the Executive and the Congress, who are charged with these duties.

21. Such a method would afford to every state an agency to which it might apply for Federal assistance without involving every other state in the Union or the entire government in the transaction.

22. Such a method would not disturb permanently the American concept of democratic government."

Dr. H. L. Snyder, Winfield, was a member of the Reference Committee which passed the resolution.

## NARCOTIC PRESCRIPTIONS

The Federal Division of Narcotics has recently issued a warning to pharmacists that it is illegal for them to fill telephone prescriptions for narcotics without receiving a prescription from the physician to place on file before the medicine is delivered to the patient.

The Bureau has requested the cooperation of all physicians in the observance of this ruling.

## MEDICAL SCHOOL

The Daily Drovers Telegram of Kansas City, Missouri, carried the following editorial in its April 6 issue. The editorial presents an excellent description of the history, recent additions, and facilities of the University of Kansas School of Medicine:

"Those citizens of Kansas who are acquainted with and appreciate the ministrations of the Kansas School of Medicine, will be glad to learn that the Kansas legislature appropriated \$20,000 for the completion of one floor of the new clinic building in the school's hospital in Kansas City, Kansas.

This great institution, a credit not only to the state of Kansas but to the entire country, has adequate building capacity to care for medical school and hospital, but some of the capacity lacks finishing and necessary equipment.

The hospital functions as an integral part of the University of Kansas School of Medicine. The school is a comprehensive institution that provides a four-year course in medicine, the first one and one-half on the campus at Lawrence and the last two and one-half years at Kansas City, Kas., where abundant clinical material is available for the practical training of prospective doctors.

The popularity of the school is shown by the application the last year of 432 persons who were not residents of Kansas and who could not be accommodated. With the new appropriation for the enlargement of the clinic it will be one more step toward making the Kansas City school and hospital unexcelled, and a testimonial to the consideration of Kansas for the health and welfare of its citizens.

The institution throughout all its history has been favored by state appropriations, by the benefactions of liberal-hearted citizens, and in recent years by federal help. The fact is, that the institution came into existence when in 1905 Dr. Simeon B. Bell donated eight acres of ground for school and hospital on a hill overlooking Southwest boulevard in Kansas City, Kas. While the state of Kansas was erecting on the site a hospital and dispensary buildings, Dr. Bell continued his generosity by erecting a laboratory building for the medical school. About the only reward which the state could render Dr. Bell for his kindness was to call the institution Bell Memorial hospital.

Unfortunately, however, the site was decided to be too inaccessible and in 1921 the city of Rosedale, a town lying between Kansas City, Mo., and Kansas City, Kas., along with friendly individuals bought thirteen acres of ground one mile south that was easy of access and presented it to the State of Kansas for a new medical school campus. The state eagerly accepted the tract and appropriated \$435,000 for three and one-half additional acres and two large buildings. In 1924 the new units were occupied, one a power plant and the other the present main hospital building.

In the course of the subsequent years, by state, individual and federal allotments, other buildings have been erected, some of which cannot be utilized to the fullest because of incompleteness and lack of equipment. All told there are now nine buildings.

The most recently erected include a nurses' home with 100 beds, now crowded; a ward building with 160 beds; children's pavilion, the \$60,000 gift by a loyal Kansas woman, which is incomplete and unequipped for lack of funds; clinic building, incompletely finished and unfurnished, built from \$87,397 in earnings and \$45,000 from PWA.



The clinics building when completed will dispense with two wooden barracks. It is in this section that patients congregate as teaching material for students. Now under construction is a new colored hospital, the result of a state appropriation of \$75,000 and a PWA grant of \$61,000.

The new plant is officially designated as the University of Kansas hospitals. The hospital the past year cared for 5,719 patients, the majority of whom were sent by various counties of the state who pay the hospital expenses.

Pupils of the medical school usually practice medicine in the State of Kansas; some are chosen to positions in universities and hospitals, and some become medical missionaries.

Kansas should be proud of the excellent name borne by the hospital throughout the country. It has been designated repeatedly as one of the high-class institutions to test new medical discoveries. The use of a liver extract in treating pernicious anemia, the use of insulin in treatment of diabetes, and recently the new drug known as sulfapyridine for the cure of pneumonia, all were proven at the Kansas hospital.

The Kansas hospital and school are located about one-half mile west of the Kansas-Missouri line. At its inception the region was sparsely populated. Today, however, Kansas City, Mo., is built to the state line, and Kansas City, Kas., is densely populated on the Kansas side of the line. To the uninitiated it is one continuous city, but the hospital and school are in Kansas City, Kas.

Wherefore, if this institution rises to the maximum of its possibilities as one of the really great in America it will attain that height by reason of the loyalty of the legislature and of those Kansas citizens who are able and eager to help finance the finishing touches. All the great hospitals and medical schools, whether primarily supported by the state or otherwise, have become great, not so much by state appropriations as by the benefactions of public-minded individuals."

### BLIND PROGRAM

Dr. C. J. Mullen, State Ophthalmologist, Kansas City, issued the following report for March, 1939, pertaining to the Kansas State Board of Social Welfare restoration of sight program:

No. of eye examination reports .....	1,781
No. of applicants approved eligible for Aid to the Blind .....	1,394
No. of applicants not eligible for Aid to the Blind .....	383
No. of eye reports pending disposition .....	4
Restoration of Sight Program	
Total number of cases declared eligible for treatment	527
No. of cases under treatment.....	87
No. of cases completed with treatment.....	160
54 cases still eligible for Aid to the Blind.	
106 cases non-eligible for Aid to the Blind after Treatment.	
No. of cases authorized treatment has been cancelled	8
Total cost of 24 cases completed since February 28, 1939 .....	\$2,208.43
Doctors' fees.....	61.51%
Hospital fees.....	29.77%
Optical fees.....	7.11%
Drug fees.....	1.61%
Total amount authorized for treatment, April 14, 1938 to April 14, 1939.....	\$22,767.14
Total amount of claims paid on completed treatment cases for same period .....	14,128.75

### Prevention of Blindness Program

No. of cases eligible for treatment.....	49
Cases authorized for treatment.....	10
Total amount authorized for the treatment of the 10 cases.....	\$724.50

### VETO MEASURE

Kansas members will be interested in the statement made by Governor Herbert H. Lehman of New York in his veto of an osteopathic bill which passed the House and the Senate of the New York Legislature and which tended to give osteopaths liberal medical and surgical privileges.

The veto measure is as follows:

"To the Assembly:

There has been great misunderstanding with regard to this bill. Many people apparently believe that the practice of osteopathy as now carried on depends on my approval of the bill. This, of course, is completely contrary to the facts.

Any persons now licensed or hereafter licensed as doctors of osteopathy are, regardless of my action on the bill, permitted to render exactly the same services as in the past. Their authority to carry on the functions now performed is in no way curtailed or abridged.

#### Value Of Osteopathy Concerned

There is no question as to the substantial value and usefulness of osteopathy. This is generally conceded and recognized. This bill would, however, give all licensed osteopaths broad additional powers. It would permit all licensed osteopaths to use instruments for minor surgical procedures, to administer anesthetics and antiseptics, and to prescribe narcotics and biological products.

The additional authority now asked by the osteopaths may be far-reaching in its effect. A minor operation, if not properly performed, I am advised, may be more serious in its effect upon the patient than some of the so-called important operations.

The administering of drugs and biologicals where there is not sufficient training and experience with regard to their effect on the patients may lead to serious ill effects.

Undoubtedly many of the persons now licensed to practice osteopathy in this State have had broad training and experience in matters relating to medicine and surgery. On the other hand, many of the osteopaths practicing in this State were licensed prior to the setting of the present high standards of training and have had little or no later experience in medicine or surgery.

#### Licensing Methods Recalled

In addition, a very substantial number of the osteopaths now practicing in this State receive their licenses not through examinations within the State but by endorsement of licenses granted to them in other states. Some of them are graduates of osteopathic schools which are no longer recognized by our board.

In my opinion legislation should provide that applicants for licenses and those who already hold licenses as osteopaths but who now desire additional powers should be required to satisfy the Board of Regents either by submitted credentials or by examination that they have had the proper instruction and training in surgical procedure and drug therapy to justify the granting of the additional powers set forth in this bill.

In this way the Regents would be able to determine those who are actually qualified to use instruments for

minor surgical procedures, to administer anesthetics and antiseptics and to prescribe narcotics and biological products. The difficulty of providing for such determination by the Board of Regents does not seem to me great.

The bill is disapproved."

Herbert H. Lehman.

### COUNTY SOCIETIES

The Central Kansas Medical Society held their quarterly meeting at Ellsworth on June 8. Dr. James A. Wheeler, Newton, spoke on "The Study of Maturation and Its Clinical Application," and Dr. Claude J. Hunt, Kansas City, Missouri, spoke on "Surgical Treatment of Benign and Malignant Lesions of the Stomach." Dr. L. A. Calkins, Kansas City, presented a movie on "Normal Obstetrical Procedures."

The Dickinson County Medical Society held a meeting in Fort Riley on May 18. Dr. Maurice Snyder, Salina; Dr. O. W. Bethea, Professor of Clinical Medicine, Tulane University, New Orleans, Louisiana; Dr. George A. Walker, Kansas City; and Dr. E. O. King of Herington, were the guest speakers.

The Lyon County Medical Society held a meeting in Emporia on May 9. Dr. Wm. Cooper, Reading, presented a paper on "Monilia Vaginitis," and Dr. P. W. Morgan, Emporia, spoke on "Basal Metabolism."

The Marion County Medical Society met at Marion on May 17. A discussion of the recent tuberculin testing program was held.

Dr. Ray A. West, Wichita, was elected president of the Sedgwick County Medical Society at a meeting in Wichita held at the Allis Hotel, on May 9. Other officers elected were: Dr. John L. Kleinheksel, vice-president; Dr. George Gsell, secretary, and Dr. Hervey R. Hodson, re-elected treasurer; directors, Dr. Fred McEwen, Dr. N. L. Rainey and Dr. George Cowles; Dr. George E. Milbank, Board of Censors; all of Wichita.

The Shawnee County Medical Society held their annual outing on June 1. Golf was played in the afternoon followed by a dinner in the evening at the Topeka Country Club, at which Tom Collins of the Kansas City Journal-Post was the speaker.

### MEMBERS

Dr. Ray D. Fraker, formerly of Garnett, has taken over the practice of Dr. H. J. Terrill in Ottawa, during Dr. Terrill's illness.

Dr. Newman C. Nash of Wichita has been made a Diplomate of the American Board of Radiology.

Dr. L. Gilbert Little, Wichita, attended the annual meeting of the American Psychiatric Association held in Chicago in May.

Dr. Allen L. Spafford, formerly of Parker, has opened an office in Ottawa.

Dr. F. L. Loveland, Topeka, has recently been appointed as Secretary of the Northwest Regional Conference.

Dr. M. E. Pusitz, Topeka, and Dr. H. R. Wahl, Dean of the University of Kansas School of Medicine, Kansas City, appeared on the program of the Twelfth Annual

Meeting of the Kansas Society for Crippled Children held in Wichita on June 2. Their subjects were respectively, "Present Trends in the Treatment of the Spastic" and "Facilities Which a Hospital Should Have to Provide Adequate Care for the Crippled Child." Dr. Pusitz also presented an exhibit on Fractures.

Dr. Don C. Wakeman, Topeka, was recently elected to membership in the American College of Physicians.

The following Kansas doctors appeared on the program of the fourteenth annual conference of social workers held in Emporia, April 13-15: Dr. J. A. Dillon, Superintendent, Larned State Hospital, Larned; Dr. Arthur Gray, Topeka; Dr. C. H. Lerrigo, Executive Secretary, Topeka; Dr. C. Meredith, Emporia; Dr. E. K. Musson, State Board of Health, Topeka; Dr. M. L. Perry, Superintendent, Topeka State Hospital, Topeka; Dr. C. F. Taylor, Superintendent, State Sanatorium for Tuberculosis, Norton; Dr. H. R. Wahl, Dean, University of Kansas, Kansas City; and Dr. James B. Weaver, University of Kansas Hospital, Kansas City.

The doctors who served on conference committees were as follows: Dr. C. H. Munger, Emporia; Dr. J. T. Naramore, Parsons; and Dr. H. R. Ross, Topeka.

An article "Observations On The Action Of Paredrine Hydrobromide Ophthalmic Solutions," by Dr. Lyle S. Powell, Lawrence, and Dr. Marshall E. Hyde, Osawatomie, which appeared in the December issue of the Journal, was listed as one of the current articles of interest by the March number of The Sight-Saving Review.

### DEATH NOTICES

Dr. Ova Portis Davis, 70 years of age, died in Topeka on May 28. Dr. Davis was born in Parke County, Indiana, in 1869. He moved to Missouri and attended elementary school in Lockwood, Missouri. He received his medical degree from the Bellevue Hospital Medical College in New York in 1897 at which time he went to Topeka to begin his practice. He was a Past President of the Society, a member of the Shawnee County Medical Society, and served as Chairman of the Medical Defense Board for fifteen years. He was Chairman-Emeritus of the Board at the time of his death.

Dr. Fred K. Day, 73 years of age, died at a hospital in Winfield on May 16. Dr. Day was a resident of Longton. He received his medical education at the University College of Medicine in Kansas City and was graduated in 1897. He was a member of the Elk County Medical Society and the American Medical Association.

Dr. Jay R. Douglas, 52 years of age, died at his home in Osawatomie on April 12. Dr. Douglas was born in Osborne, Kansas, in 1887 and received his early education at Mound City, Kansas. He attended the Eclectic Medical University, Kansas City, and the Kansas City College of Medicine and Surgery, from which he was graduated in 1919. Dr. Douglas had practiced medicine in Osawatomie seventeen years and had been a resident of that town for thirty-two. He was a member of the Miami County Medical Society.

Dr. Rollin Roy Nevitt, 65 years of age, died at Mercy Hospital in Fort Scott on May 14. Dr. Nevitt was born in 1874 and received his medical degree from the Kansas City Homeopathic Medical School in 1896. He served as a Captain in the medical corps during the World War. He was a past president of the Allen County Medical Society and was a Fellow in the American Medical Association.



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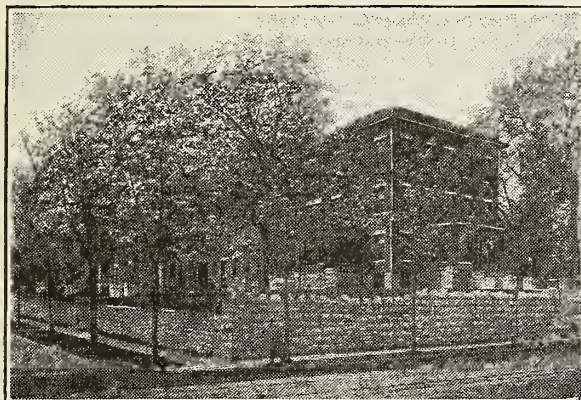
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## ANNOUNCEMENTS

The American Congress on Obstetrics and Gynecology will be held in Cleveland, September 11-15, 1939. Further information may be obtained from The Annex, 650 Rush Street, Chicago, Illinois, c/o R. W. Holmes, M. D., Treasurer.

The American Board of Obstetrics and Gynecology announces that at the annual meeting of the Board held in St. Louis on May 12, it was found necessary, on account of increased administration expenses, to increase the application and examination fees. Effective immediately, these are to be as follows: Application fee \$15.00, payable upon submission of application for review by Board. Examination fee \$75.00 payable upon notification to candidate of acceptance of the application and assignment for examination. Neither fee is returnable. This increase does not apply to candidates whose applications were filed prior to May 12, 1939.

The next written examination and review of case histories (Part I) for Group B candidates will be held in various cities of the United States and Canada on Saturday, December 2, 1939, at 2:00 P.M. The Board wishes to announce that it will hold only one Group B. Part I, examination in this and subsequent years. Candidates who successfully complete the Part I examinations proceed automatically to the Part II examinations held later in the year.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

The twenty-third annual meeting of the Railway Surgeons will be held at the Palmer House, Chicago, September 19-23.

This association includes members in practically every railroad company in the United States, as well as the separate group organizations.

A scientific program has been arranged and all physicians and surgeons are invited to attend the sessions of this meeting as guests of the organization. There will be no registration fee to M. D. non-member guests. A technical show will be held, in addition to the scientific exhibits, including the presentation of new equipment, new pharmaceutical and biological products and the latest techniques in many branches of the profession. Complete program and information regarding the meeting and the exhibits may be secured by addressing Mr. A. G. Park, Convention Manager, the American Association of Railway Surgeons, Palmer House, Chicago.

The American Public Health Association has recently adopted five Reports dealing with Educational Qualifications of Public Health Statisticians, School Health Educators, Public Health Engineers, Sanitarians, and Sub-Professional Field Personnel in Sanitation. Copies may be secured from the Book Service, American Public Health Association, 50 West 50th Street, New York, N. Y.

The eighteenth annual scientific and clinical session of the American Congress of Physical Therapy will be held September 5, 6, 7, 8, 1939, at the Hotel Pennsylvania, New York City.

Written examinations for certification by the American Board of Internal Medicine will be held in various sections of the United States on the third Monday in October and the third Monday in February. Formal application must be received by the Secretary before August 20, for the October 16, examinations and on or before January 1 for the February 19 examinations. Application forms may be obtained from Dr. William S. Middleton, Secretary-Treasurer, 1301 University Avenue, Madison, Wisconsin.

The forty-fourth annual convention of the American Academy of Ophthalmology and Otolaryngology will be held in Chicago, October 8-13 at the Palmer House. The academy has a membership of about 2,800 eye, ear, nose, and throat specialists. About half the program will be devoted to instructional courses, with many eminent specialists as speakers. For further information write the Academy at 1500 Medical Arts Building, Omaha, Nebraska.

The American Public Health Association will hold their sixty-eighth annual meeting in Pittsburgh, Pennsylvania, October 17-20, with headquarters in the William Penn Hotel. Dr. Reginald M. Arwater, 50 W 50th Street, New York City, N. Y., is the Executive Secretary of the Association.

The Third Congress of the Pan-Pacific Surgical Association will be held in Honolulu, September 15-28, 1939. Communication for information should be directed to George W. Swift, M.D., 902 Boren Avenue, Seattle, Washington, past president of the Association.

## BOOK REVIEWS

INJECTION TREATMENT OF VARICOSE VEINS AND HEMORRHOIDS—H. O. McPheeters, M.D. and James K. Anderson, M.D. Publishers, F. A. Davis Company, Philadelphia. Price \$4.50.

The treatment of varicose veins by injections of sclerosing solutions is here presented in a most effective manner. With a groundwork of anatomy, embryology, etiology, differential diagnosis, and pathology associated with varicose veins, the author leads on to a detailed discussion of the preferred methods of treatment with the indications for each combination of therapeutic measures. A comparison of the solutions which are available for injections, a discussion of the necessary equipment, and a description of the detailed technic of the method follow. The author's technic of injection is somewhat more elaborate, and his plan of treatment more intensive than that commonly used, but it is based on sound physiological principles and reasoning, and has given excellent results in his hands. Concluding the monograph there is a consideration of the after care, the complications, and the causes of failure.

The section of the book devoted to the treatment of hemorrhoids by the injection method is also an excellent presentation of the subject. Emphasis is placed on the anatomical relationships, the pathology, a proper diagnosis of the type of hemorrhoids present, proper selection of cases for this type of treatment, and the necessity of a thorough course of treatment if satisfactory results are to be obtained. Disadvantages and complications are discussed as well as the advantages, and after reading it the reader comes to the opinion that the author has expressed in his conclusions—that " . . . with care in selecting his cases, the use of



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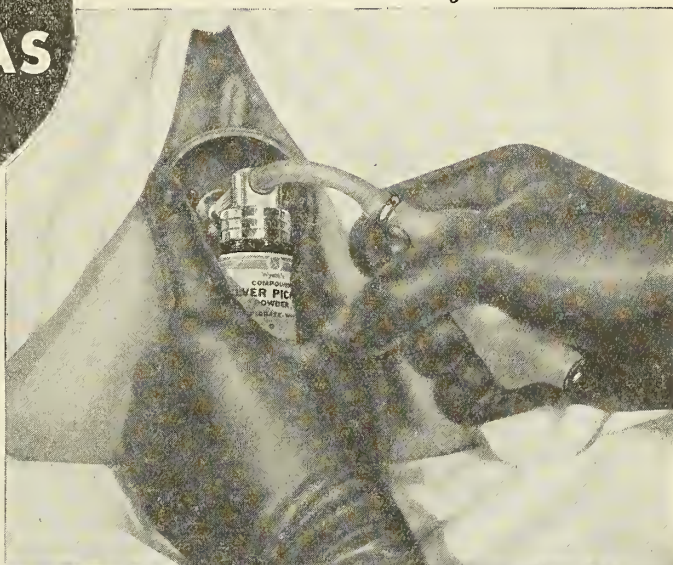
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#### ANNOUNCES CONTINUOUS COURSES

**MEDICINE**—Two Weeks Course Gastroenterology June 19, September 25. Two Weeks Personal Course Electrocardiography August 7. Special Courses in August. Two Weeks Course October 9.

**SURGERY**—General Courses One, Two, Three and Six Months; Two Weeks Intensive Course in Surgical Technique with practice on living tissue; Clinical Courses; Special Courses. Courses start every two weeks.

**GYNECOLOGY**—Two Weeks Personal Course June 19; Four Weeks Personal Course August 28. Two Weeks Course October 9.

**OBSTETRICS**—Two Weeks Intensive Course June 19, October 23. Informal Course every week.

**FRACTURES & TRAUMATIC SURGERY**—Ten Day Formal Course June 19, September 25. Informal Course every week.

**OTOLARYNGOLOGY**—Two Weeks Intensive Course starting September 11. Informal Course every week.

**OPHTHALMOLOGY**—Two Weeks Intensive Course starting September 25. Informal Course every week.

**CYSTOSCOPY**—Ten Day Practical Course rotary every two weeks. Urology Courses every two weeks.

**ROENTGENOLOGY**—Special Courses X-Ray Interpretation, Fluoroscopy, Deep X-Ray Therapy starting every week.

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judgment, patience, and honesty with the patient; the results should be all that he and his patient desire".

The presentation of this similar type of treatment for the similar pathological conditions (varicosities of the lower extremity and hemorrhoidal veins) is excellent throughout. This book is worth owning.—O. R. C.

**SYMPTOMS OF VISCERAL DISEASE:** A study of the vegetative nervous system in its relationship to clinical medicine. By Francis M. Pottenger. Fifth edition 1938. Published by C. V. Mosby Co., St. Louis. Price \$5.00.

Since the first edition of this book in 1919 considerable knowledge has been added to an understanding of the vegetative nervous system both in its anatomic and physiologic aspects. The functional disturbances, resulting from disordered activity of this mechanism which controls normal visceral activities, are still one of our greatest clinical problems. These disturbances may result from abnormal visceral reflexes due to visceral disease or due to psychic or central conditioning of these reflexes. The author limits his discussion to the former.

Symptoms of disease are considered in a broad sense, including those brought about by reflex action, toxemia, and resulting changes in the nervous and endocrine balance, in addition to those caused directly by the disease process. The new edition contains a chapter on visceral pain and each organ or system is considered separately with its visceral reflexes and their clinical importance. D. C. W.

**PRACTICAL BACTERIOLOGY, HAEMATOLOGY, AND ANIMAL PARASITOLOGY,** by E. R. Stitt, M.D., Paul W. Clough, M.D., and Mildred C. Clough, M.D. Ninth Edition. 961 pages, 208 illustrations, published by P. Blakiston & Sons.

To many physicians and to most of those engaged in clinical laboratory work, "Stitt" needs no introduction. For eight editions and more than twice as many years, it has been a standard reference work as well as a laboratory manual for the technician and a guide to interpretation of laboratory findings for the clinical practitioner. In the preparation of the ninth edition, Admiral Stitt has had the assistance of Drs. Clough, of John Hopkins University. The entire text has been rewritten, with the addition of so much new material as to make the present publication more nearly a new book than a new edition of an old one.

The section on Bacteriology is particularly adequate, and is written from the viewpoint of the diagnostician rather than from that of the theoretical bacteriologist. The presentation is of diseases, and the identification of the bacteria causing them, rather than of systemic bacteriology, with parenthetical reference to the diseases which those bacteria may cause.

Symptomatology, especially of the rarer diseases, and of those more common to the tropics, has been stressed throughout the book, with reference to the laboratory procedures which are of great value in differentiating between diseases presenting similar or confusing symptoms.

The sections on Haematology and Blood Chemistry have been expanded to include many recent developments and technics. In the latter, the technics are presented concisely, and the bulk of the chapter is devoted to the clinical interpretation of results, and the clinical indications for various tests.

Perhaps the most valuable feature of the book is the final section, "Laboratory Procedures Useful in Diagnosis,"

in which the diseases in which laboratory examinations may be of value are listed alphabetically, together with the appropriate laboratory procedures for each.

The index is comprehensive.—A. G.

## NEW BOOKS RECEIVED

**DRUG ADDICTS ARE HUMAN BEINGS**—By Henry Smith Williams, M. D. Published by Shaw Publishing Company, Washington D. C., at \$2.50 per copy. Octavo 273 pages, nine drawings, and divided into five divisions, or books. Book I, Cruel, But Not Unusual. Book II, Execution by Code. Book III, The Blackmail Code and the Doctors. Book IV, Ipso Facto Racketeers in Action. Book V, From Star Chamber to Court of Justice.

**THE NEW INTERNATIONAL CLINICS, VOLUME IV, New Series, December 1938.** Edited by George Morris Piersol, M.D., professor of medicine, Graduate School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania. Octavo, 349 pages, illustrated, and published by the J. B. Lippincott Company, Philadelphia, Pennsylvania.

**CLINICAL LABORATORY METHODS AND DIAGNOSIS** By R. B. H. Gradwohl, M.D., director of the Gradwohl Laboratories and Gradwohl School of Laboratory Technique. Octavo 1607, 492 illustrations in the text and 44 color plates. Published by the C. V. Mosby Company, St. Louis, Missouri. Chapter I, General Consideration; Chapter II, Urine Analysis; Chapter III, Blood Chemistry; Chapter IV, Hematology; Chapter V, Gastric Analysis; Chapter VI, Examination of Puncture Fluids; Chapter VII, Examination of Sputum; Chapter VIII, Special Tests; Chapter IX, Feces; Chapter X, Bacteriologic Applications to Clinical Diagnosis; Chapter XI, Serology; Chapter XII, Basal Metabolism; Chapter XIII, Postmortem Examinations; Chapter XIV, Tissue Cutting and Staining; Chapter XV, Preparation of Museum Specimens; Chapter XVI, Toxicologic Technic; Chapter XVII, Detection of Crime by Laboratory Methods; Chapter XVIII, Parasitology and Tropical Medicine; and Chapter XIX, Minimum Supplies, Equipment and Reagents for Pathologic Laboratories.

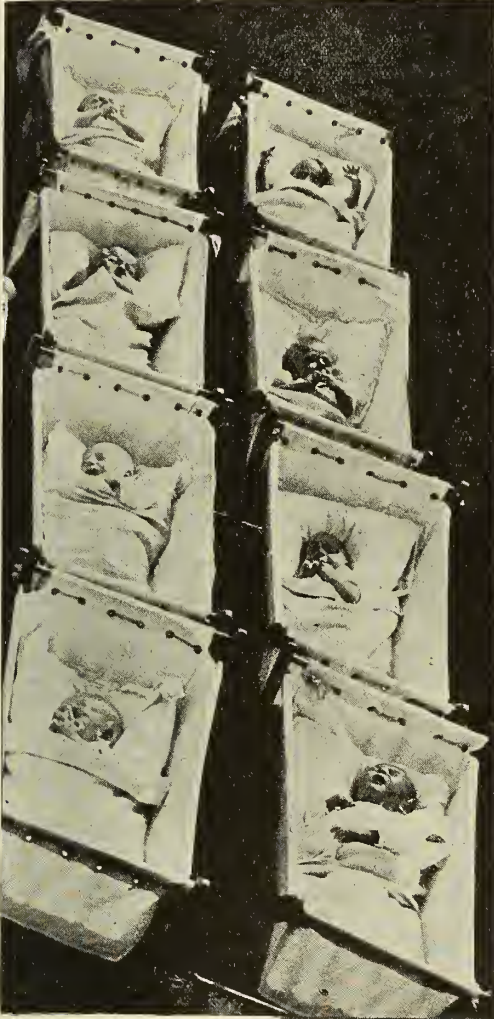
**THE TREATMENT OF FRACTURES:** By Charles Locke Scudder, A.B., Ph.B., M.D., F.A.C.S., Consulting Surgeon to the Massachusetts General Hospital; Formerly Assistant Professor of Surgery at the Harvard Medical School; Fellow American Surgical Association; Member of the American Society of Clinical Surgery. Eleventh Edition, Revised. 1209 pages with 1717 illustrations. Philadelphia and London: W. B. Saunders Company, 1938, at \$12.00 per copy.

**SYNOPSIS OF CLINICAL LABORATORY METHODS** By W. E. Bray, M.D., professor of clinical pathology, University of Virginia, Director of Clinical Laboratories, University of Virginia Hospital. Second Edition, with fifty-one text illustrations, seventeen color pages, and 408 pages. Published by the C. V. Mosby Company, St. Louis, Missouri. The sixteen chapters of the book are on such subjects as Urinalysis. Hematology, Sputum and Milk Examinations, Bacteriology, Feces and Intestinal Parasites, Gastric Analysis, Allergy Tests, Basal Metabolism Tests, Surgical Pathology, and concludes with Indicators, Stains and Staining Solutions, Reagents, Removal of Laboratory Stains, Atomic Weights, Table of Equivalents, Table of Normals.



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\*Further Clinical Observations on Feeding Infants Whole Milk, Gelatinized Milk, and Acidified Milk. C. Loring Joslin, M.D., F.A.A.P.; Bulletin of the School of Medicine, University of Maryland; Jan. 1939.

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**MATERIA MEDICA DRUG ADMINISTRATION AND PRESCRIPTION WRITING**—Oscar W. Bethea, M. D., F. C. S., F. A. C. P., Professor of Clinical Medicine, Tulane School of Medicine; Professor Therapeutics, Tulane Graduate School of Medicine; Senior Physician, Southern Baptist Hospital (New Orleans); Senior Visiting Physician, Charity Hospital of Louisiana; Member revision Committee, U. S. Pharmacopoeia. Fifth Revised Edition, in Three Parts, Octavo, 577. Published by The F. A. Davis Company, Philadelphia, Pennsylvania, at \$5.00 per copy. Part I, *Materia Medica*. Part II *Prescription Writing*. Part III, *Illustration showing Incorrect and Correct Forms in Prescription, with actual examples.*

**THE 1938 YEAR BOOK OF DERMATOLOGY AND SYPHILOLOGY**—Edited By Fred Wise, M. D., Professor of Clinical Dermatology and Syphilology, New York, Postgraduate Medical School and Hospital of Columbia University; and Marion B. Sulzberger, M. D., assistant Professor of Clinical Dermatology, New York Postgraduate Medical School and Hospital of Columbia University. Published by the Year Book Publishers, Chicago, at \$3.00 per copy. Octavo 736 pages with fifteen chapters and illustrations. Includes sections on Modern Treatment of Common Fungous Affections; Mycotic Infections, Including Eczematous Eruptions Due to Fungi; Allergy and Immunology; Drug Eruptions; Other Infections; Venereal Diseases Other Than Syphilis; Syphilis and Its Therapy.

**WORKBOOK IN ELEMENTARY DIAGNOSIS FOR TEACHING CLINICAL HISTORY RECORDING AND PHYSICAL DIAGNOSIS**—By Logan Clendening, M. D., Professor of Clinical Medicine, University of Kansas School of Medicine, Kansas City, Kansas. Published by the C. V. Mosby Company at \$3.00 per copy. Octavo 167 pages with illustrations. Textbook for use of medical students in recording diagnosis, examinations and working out lessons in the text.

**A TEXTBOOK OF HEMATOLOGY**—By William Magner, M. D., Pathologist, Saint Michael's Hospital, Toronto, Canada; Lecturer in Pathology, University of Toronto. Published by P. Blakiston's Son & Co., Inc., Philadelphia. Octavo 395 pages. The book consists of seventeen chapters, with charts, colored plates, and photomicrographs used to illustrate the contents. Chapter titles are as follows: The Cellular Elements of the Blood; The Bone Marrow; The Erythrocytes; Platelets; Leukocytes; Hemoglobin and Its Derivatives; Laboratory Methods; The Pathogenesis of Anemia; Dyshemopoietic Anemias; Post-Hemorrhagic Anemias; Hemolytic Anemias; Polycythemia Vera; The Leukemias; Myelogenous, Lymphatic and Menocytic Leukemias; References, and Index.

**THE PHYSICIAN'S BUSINESS**—By George D. Wolf, M. D., Attending Otolaryngologist, Sydenham Hospital, New York City, and Riverside Hospital, New York City. Published by the J. B. Lippincott Company, Philadelphia. Octavo 384 pages with 14 chapters and 57 illustrations in the text. The foreword of the book is presented by Harold

Rypins, M. D. The chapters include, Hospital Internship; Medical Careers Other Than Private Practice; Specialization; Location; Planning and Equipping an Office; Technics; Office Personnel; Surgical Instruments; Forensic Medicine; Income Tax; etc.

**A TEXTBOOK OF PATHOLOGY**—Third Edition, Edited by E. T. Bell, M. D., Professor of Pathology in the University of Minnesota, Minneapolis, Minnesota. Published by Lea & Febiger, Philadelphia, at \$9.50 per

copy. Octavo 894 pages, with 412 engravings and two colored plates. The 29 chapters in the book contain the following: Predisposition to Disease; Mechanical Injuries; Injuries Due to Physical Agents; Injuries Due to Chemical Agents; Circulatory Disturbances; Retrogressive Tissue Changes; Inflammation; Tuberculosis; The Venereal Diseases; Leprosy and Glanders; The Mycoses; Tumors; Gynecological Pathology; Diseases of the Urinary System; Diseases of the Reproductive Organs of the Male; Diseases of the Heart; Diseases of the Blood-Vessels; Acute Infectious Diseases; Diseases of the Thymus and Lymph Nodes; Diseases of the Spleen; Diseases of the Respiratory System; Diseases of the Digestive System; Diseases of the Pancreas; Diseases of the Liver and Gall-Bladder; Diseases of the Ductless Glands; Neuropathology; Diseases of the Blood; Diseases of the Bones and Joints. Contributors to the text other than Dr. Bell, are B. J. Clawson, M. D., University of Minnesota; Hal Downey, Ph. D., University of Minnesota; J. S. McCartney, M. D., University of Minnesota; and C. J. Watson, M. D., University of Minnesota.

**PRACTICAL BACTERIOLOGY, HAEMATOLOGY, AND ANIMAL PARASITOLOGY**—By E. R. Stitt, M. D., Rear Admiral, Medical Corps, and Surgeon General, U. S. Navy, Retired; Paul W. Clough, M. D., Chief of Diagnostic Clinic, Johns Hopkins Hospital; Mildred C. Clough, M. D., Formerly Fellow in Bacteriology and Instructor in Medicine, Johns Hopkins University. The Ninth Edition, Published by P. Blakiston's Son and Company, Inc., Philadelphia. The books divided into four parts with an octavo of 961 pages and forty-two chapters. Charts for the use of the reader are placed on the inside of the front and back covers of the book. Part I, *Bacteriology*; Part II, *Haematology*; Part III, *Animal Parasitology*; and Part IV, *Pathological Examinations of the Various Fluids and Organs*. Chapters in the book include: Study and Identification of bacteria; Study and identification of spirochaetes; Blood Cultures; Examination of the Gastric Contents; The Technique of Clinical Blood Examinations; Diseases of the Blood; Important Animal Parasite Diseases; The Flat Worms; The Mosquitoes; Poisonous Snakes and Lizards; Diagnosis of Infections of the Ocular Region; The Endocrine Glands; etc.

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### RESOLUTIONS

The following resolutions and reports are among those adopted by the House of Delegates of the American Medical Association at its St. Louis meeting:

"Whereas, Thousands of children with defective vision and hearing in the schools of our country are endeavoring to obtain an education; and

Whereas, The importance of the early diagnosis and correction of these defects is necessary to better education; be it

Resolved, That the American Medical Association give support and encouragement to the various state



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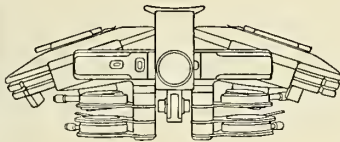
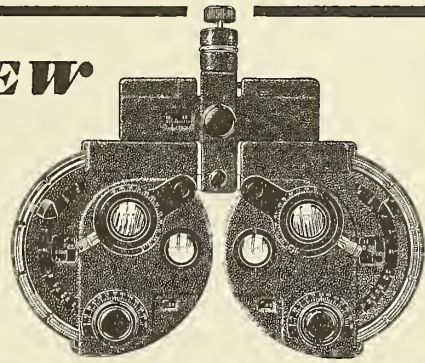
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medical societies and other agencies and foundations in carrying on a nation-wide testing of school children for the early detection of these handicaps."

\* \* \*

"Whereas, Years ago the examinations made by clinical laboratories were largely factual in nature and, as a consequence, a portion of the work was done by chemists and technicians not having medical degrees or being licensed to practice medicine; and

Whereas, The developments in laboratory medicine, particularly in the last one or two decades, have been such as to require clinical medical knowledge for the safe performance of many of the newer diagnostic procedures undertaken; and

Whereas, Specimens are obtained by surgical means from the spinal canal, veins and organs of the body and dyes and other drugs are injected for the purpose of various functional tests, all definitely requiring clinical medical experience and judgment for their performance and interpretation if the safety of the patient is to be guarded; therefore, be it

Resolved, That the American Medical Association specifically recognize the practice of clinical pathology as a specialty of medicine and believes that those persons who practice it and who act as directors of clinical laboratories must be graduates of recognized medical schools and licensed to practice medicine in their respective states; and further be it

Resolved, That owing to the nature of the subject, the American Medical Association recognize that it is necessary for these persons to complete at least three years of adequate training in clinical pathology, in addition to the training which they have received in regular courses in medical schools, before assuming the directorship of clinical laboratories."

"Whereas, The Army Medical Library and Museum are housed in a building entirely inadequate for their present purposes and without possibility of expansion for future growth; and

Whereas, The immensely valuable collection of medical literature and of anatomic and pathologic specimens is in constant danger of destruction both from the hazards of fire and from the limited space for their proper preservation; and

\* \* \*

Whereas, The Army Medical Library and Museum constitute a monumental asset both to the United States government and to the medical profession of the entire country; and

Whereas, The Secretary of War was authorized by Act of Congress, approved June 15, 1938, to construct a building to replace the present quarters of the Army Medical Library and Museum but was not enabled by the necessary appropriation to carry out the purpose of the Act; now therefore be it

Resolved, That the Medical Society of the District of Columbia respectfully petitions the Congress to provide the necessary funds for a new and adequate building for the Army Medical Library and Museum at as early a date as possible; and

Resolved, That copies of this resolution be forwarded to the President of the United States, to the Secretary of War, to the Director of the Budget, to the Surgeon General of the Army, to the Chairman of the Senate and House committees on military affairs and to the senate and house committees of the District of Columbia; and be it further

Resolved, That the delegates be instructed to present this resolution to the House of Delegates of the

American Medical Association at the St. Louis Session and to endeavor to secure endorsement of its purposes by that House."

\* \* \*

"Amend chapter VIII, section 1, beginning with the sentence 'The Council on Medical Education and Hospitals,' line 4, page 19, and ending at the period in the ninth line on page 20 to read as follows: The Council on Medical Education and Hospitals shall consist of nine members each elected for nine years, one being elected each year: Provided three members be elected in 1940, one for nine years, one for eight years and one for seven years, and provided that the present members of the Council on Medical Education and Hospitals be continued as members until the terms for which they were elected shall have expired. The members of the Council shall be elected by the House of Delegates no nomination by the Board of Trustees, provided that the Board of Trustees shall place in nomination the names of three Fellows of the American Medical Association for each position. The members of the Council shall not be eligible for reelection. The Board of Trustees shall make their choice on the basis of securing for membership on the council representation from general medical practice, special medical practice, medical education and graduate medical education. This Council shall prepare each year a report of its work and its recommendations, which shall be submitted to the House of Delegates.

Amend chapter IX, sec. 2, line 4, page 23, by inserting after the words 'medical education' the words 'including premedical, undergraduate and graduate medical education.'"

\* \* \*

"Whereas, It is well known that many persons are blind and that a great many have defective sight; and

Whereas, An analysis of the records suggests the conclusion that in many cases the sight might have been saved had adequate protective measures been employed; and

Whereas, The preservation of human sight is of inestimable value to the individual; and

Whereas, A large percentage of the blind are or become public charges; therefore be it

Resolved, That the Section on Ophthalmology petition the House of Delegates to request the Board of Trustees of the American Medical Association to appoint a special committee to study all phases of the problem of prevention of blindness and that a report of its activities be made at the 1940 session of the House of Delegates."

\* \* \*

"Whereas, The House of Delegates has for years past urged the unification of the health and medical activities of the federal government, except for the medical services of the Army and Navy; and

Whereas, These activities are at present widely scattered in various governmental agencies; therefore be it

Resolved, That the House of Delegates of the American Medical Association go on record as favoring: (1) That the health and medical activities of the Children's Bureau be transferred from the Department of Labor and placed with the United States Public Health Service; and (2) That the Division of Industrial Health remain in the United States Public Health Service, where it is now."



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In view of the favorable reception accorded the etiologic classification in the 1937 edition of "INTRODUCTION TO DERMATOLOGY" and the tendency nowadays to inquire "What is going on?" rather than "What name is applicable to this manifestation?" the material has been arranged in a fashion radically different from the arrangement of the ninth edition.

There have been added a number of colored plates and 300 new illustrations. By condensation of type and more effective use of page space, 50 per cent increase in textual matter and approximately 3000 additional bibliographic entries have been included. Descriptions of all significant entities, syndromes and concepts and of many exotic, unusual and even exceptional dermatoses have been incorporated. The authors have not hesitated to give their opinion and ideas particularly regarding treatment. In some cases these are original as in the treatment of Calcinosis Universalis, Urticaria Pigmentosa, and Pityriases Rosea, in the etiology of Infantile Mycotic Eczema as a birth canal infection and in the description of Keratoses and early Carcinomas.

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## AUXILIARY

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### PRESIDENT'S MESSAGE

Dear Auxiliary Members:

As one year closes and another begins I bring you greetings. The convention of the Auxiliary to the American Medical Association in St. Louis was a great inspiration as it must be to every new president.

Each session brought messages from all corners of the United States and it was thrilling to hear what others were doing. So many Auxiliaries are sponsoring student loans of one kind or another to help young doctors and nurses to get their education. Several help their local hospitals, others help the visiting nurses association. In some places there are study groups informing themselves on health education.

Dr. Rock Sleyster, the new President of the A. M. A., made us as doctor's wives feel very important, by telling how much it means to the doctor to have an understanding wife; one who must share her husband with the community and one who must be tolerant and ready to bolster up the disappointments which so frequently come. In short, we went away resolved to be better wives than ever before.

The national officers are such far-seeing women that we were filled with encouragement to come back to our respective states and plan for a year full of earnest work.

Needless to say the social end of the convention was most enjoyable, with drives, teas, buffet suppers, luncheons and closing with the "Bring Your Husband Dinner." St. Louis was, as always, a most gracious hostess.

Let each county Auxiliary plan her program early for the year, and as the material comes to us from our national organization, we can add to our program. In closing, may I wish for each of you a most pleasant vacation as we look forward to a full and fruitful year.

Mrs. La Verne B. Spake.

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The Kansas Medical Auxiliary met in Topeka May 2, 3, 4, with the usual large attendance.

A tea at the executive mansion Tuesday afternoon opened the social activities. The hostesses were Mrs. Payne Ratner and the members of the Shawnee County Auxiliary. That evening the visiting ladies were entertained with a theatre party at the Jayhawk. Wednesday the members of the Auxiliary were delightfully entertained with a luncheon and fashion show held in the roof garden of the Hotel Jayhawk. The speakers' table was centered with bouquets which were presented to the guests. Places were marked with favors colorfully wrapped to add to the decoration. The luncheon address was given by Dr. Arthur D. Gray. His subject was "The Diagnosis and Treatment of the Jitters." He also discussed his marionettes. The luncheon was attended by 274 members.

The large number of Auxiliary members and doctor's wives who participated in the social and business activities of the Auxiliary meeting were delighted with the program provided by the Shawnee County Auxiliary and were loud in their praise of the organization work necessary to make all affairs run so smoothly.

Mrs. La Verne B. Spake, of Kansas City, was installed as president of the state Auxiliary following the luncheon at which time she announced her committee chairmen. Other officers elected are as follows: President-Elect, Mrs. T. D. Blasdel, Parsons; 1st vice-president, Mrs. L. S. Nelson, Salina; 2nd vice-president, Mrs. A. C. Flack, Fredonia; recording secretary, Mrs. C. Omer West, Kansas City; treasurer, Mrs. F. L. Dennis, Dodge City.

Committee Chairmen: Archives, Mrs. J. B. Carter, Wilson; Health-Education, Mrs. F. C. Taggart, Topeka; Historian, Mrs. G. M. Edmonds, Horton; Hygeia, Mrs. C. D. Kosar, Concordia; Legislation, Mrs. E. C. Duncan, Fredonia; Organization, Mrs. F. E. Coffey, Hays; Parliamentarian, Mrs. M. O. Nyberg, Wichita; Press-Publicity, Mrs. W. G. Emery, Barnard; Public Relations, Mrs. R. W. Urie, Parsons; Exhibits, Mrs. E. J. Nodurft, Wichita.

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The picturesque country lodge of Dr. and Mrs. E. E. Tippin was the scene of a covered dish luncheon Monday, May 8, when the members of the Sedgwick County Auxiliary foregathered at their regular meeting. Following the luncheon the newly elected officers were installed, Mrs. J. S. Reifsneider, president; Mrs. C. H. Warfield, vice-president; Mrs. Hervey Hodson, president-elect; Mrs. N. C. Nash, recording secretary; Mrs. C. K. Wier, corresponding secretary; Mrs. V. L. Pauley, treasurer.

### OUT-GOING PRESIDENT'S MESSAGE

I come before you to express gratitude for the privilege of having been your president for the past year. A year ago this office seemed a great responsibility, but with all of your loyal cooperation, we have lived through it with greater friendships and understanding.

If this year has been successful, fairness compels me to divide honors with those who have made the success possible. We have a great responsibility to the future as well as an important obligation to the past.

You sent me to San Francisco, 1600 miles west of my home. I enjoyed the National Auxiliary meetings, made many friends, and met old friends, and one pleasure was to have so many of the Kansas Auxiliary members enjoy the National Auxiliary meeting in San Francisco with me. It was all so beneficial and inspiring to the Auxiliary members.

In October, I visited Saline and Wyandotte counties. November 11, I attended the mid-winter board meeting in Chicago. December was our red letter month. It gave us the pleasure of having our National President, Mrs. C. C. Tomlinson of Omaha, attend our mid-winter board meeting in Hays. Most of our board members were present, coming from widely scattered points of the state. The Central Kansas Auxiliary members were the hostesses for the day.

I made a special trip to Topeka the 1st of March pertaining to the convention. Later in March I started on another official visit with my corresponding secretary, Mrs. H. R. Bryan of Hays, visiting Wilson, Neosho, Labette, and Sedgwick counties. I returned home for a couple of days, to start out again with Mrs. Bryan to visit Cloud county.

In April, I visited Ford county. Barton and Neosho counties have been newly organized this year. I have written practically 300 letters and cards and traveled 6,700



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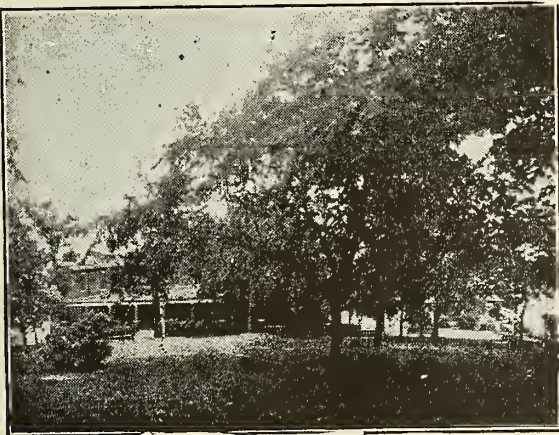
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miles. I have written seven president's letters in the Journal of The Kansas Medical Society.

It would be impossible to record the numerous courtesies extended to me on my visits as president, and to all who helped make my year a success, I thank you.

Mrs. F. E. Coffey.

### IN-COMING PRESIDENT'S ADDRESS

I accept this gavel with humility, being fully aware of the responsibility and dignity it represents, and I shall endeavor to use it in all sincerity through my term of office.

As president of the Kansas Medical Auxiliary I bring you greetings. I am very grateful and ever cognizant of this high honor bestowed upon me. It is a privilege to serve you as your president. I realize more fully each day the responsibilities the office entails, and I trust that you will bear with me as I take the helm, and remember that "to err is human" and there is much that I do not know, but with the guidance of our advisory board, and the love, fellowship and cooperation of all of you, I shall seek to do the best that in me lies.

I shall look to each Auxiliary for new inspiration and help in building a stronger, more enthusiastic State Auxiliary. From each individual member I am anticipating the support you so loyally displayed to my predecessors.

As we look forward together to the coming year shall we not pledge ourselves to stand shoulder to shoulder, arming ourselves with knowledge of legislative matters, health measures and anything that is pertinent to our Auxiliary so that we may be able and prepared to disseminate information to lay groups when called upon. Shall we not take it upon ourselves as individuals and as doctors' wives to be better acquainted with the things in medicine that so deeply concern our husbands and be ready to back their program when called to do so.

I should like to ask each chairman if she will carefully consider her job, study her hand book, and prepare some outline that she feels can be accomplished in our state, then we will consider it together.

Let us determine this year to get our dues collected when fall activities begin so as to be well in advance of the deadline. The state treasurer has a hard enough time at the last minute.

Through our health education or program chairman let us sing out our aims and purposes.

To our councilors let me urge that you make all possible contacts to stimulate new interest and organize wherever you can. I shall be at your command when needed to help in any way possible.

To every member I would like to leave one word that stands out in your minds; and that is Hygeia. To each of you I would like to say sell the value of this magazine first, for it is truly worthy of its name; then, the magazine itself, to at least two non-medical persons.

And to all of you loyal workers who have preceded me in this field, let me say I am expecting you to stand by for any S.O.S. signal I might send out, for I know there

will be many times when I will need your counsel and advice.

Again let me say thanks and with the cooperation of you all I shall look forward to a most happy year together.  
Mrs. La Verne B. Spake.

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# The Journal Of THE KANSAS MEDICAL SOCIETY

*Owned and Published by The Kansas Medical Society*

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Number 7

## THE TREATMENT OF CONGESTIVE FAILURE

Julius Jensen, M.D.

St. Louis, Missouri

### INTRODUCTION

By congestive failure we understand a disproportion between the strength of the heart and the work it has to do. We think of the heart in a strictly mechanical sense, as a pump which fails to shift the blood from the venous to the arterial side of the circulation. In angina pectoris, another form of heart failure, the heart does not fail as a pump, but signifies by other means its inability to carry on. Furthermore, heart failure need not necessarily mean that the heart has become weaker, unquestionably it many times fails because its load exceeds its normal power. We may compare heart failure with the failure of a team of horses to move a load of rocks. We may then overcome the failure by increasing the tractive power of the horses or by lightening the load or by a combination of the two. Cardiac therapy has made use of all three of these methods, most recently the trend has been to use the third.

### REST

Rest is the first and universally accepted principle in the treatment of heart failure. This means complete and absolute rest in the position most comfortable to the patient. Often patients with heart failure are ambulatory and it is hoped that an adequate result may be obtained from digitalis and diuretics. While these measures may be sufficient they often fail, even though the patient be confined to his room. The complete rest offered by a hospital bed, away from the patient's usual surroundings may benefit him more than any other single measure. The cardiac patient, being orthopneic, naturally will insist upon sitting up in bed, and in advanced failure it may be better to place him with his legs dependent and his elbows resting on a firm support so that he may use his auxiliary respiratory muscles. For this purpose a specially constructed cardiac bed is preferable, though satisfactory arrangement can be made by means of chairs and suitable bedside tables.

The rest should be continued as long as the heart shows signs of distress, but not much longer. Once the heart again controls the circulation it should be submitted to some training which will enable it to recover its tone. Prolonged absolute bedrest following heart failure is not advisable except when it is required by some complication, such as active rheumatic carditis.

When a patient with congestive failure is first seen he is frequently so exhausted that he cannot relax. He should then receive morphine in adequate doses: One-fourth grain to begin with and one-sixth to be repeated as often as necessary. By many cardiologists, morphine is considered more important than any other drug used in the treatment of congestive failure. When the patient has had one or two nights of sleep through the aid of morphine, milder sedatives of the barbiturate or bromide group may be substituted.

### WATERBALANCE

While heart failure is characterized by the retention of fluid in the tissues it is not associated with hydremia. Water is driven into the tissues by the increased hydrostatic pressure in the peripheral circulation and this process is accentuated because the capillaries are damaged by anoxemia. With twenty to thirty additional pounds of water in the body it is desirable to establish a negative water balance. Consequently, fluids should be limited to 800-1200 cc. daily, depending on the surrounding temperature and the patient's weight. The best control of the water balance is not the measurement of intake and output; the urine output is difficult to determine in many sick patients, and it does not take into consideration fluid lost through the lungs, bowels or skin. Regular weighing of the patient is a much surer guide on gain or loss of fluid and should be done whenever possible. If cardiac patients are regularly weighed, retention of fluid may thus be discovered earlier than by looking for manifest edema. The discharge of fluid is best obtained by the combined use of cardiac and renal stimulation.

Venesection has a distinct but limited place: In acute pulmonary edema and in general congestive failure with marked cyanosis and pulmonary congestion, acute distress is often markedly relieved by

the removal of 3-700 cc. of blood. But because the blood itself is not waterlogged, venesection cannot find general application in the treatment of congestive failure.

### DIGITALIS

Of the drugs specifically used in cardiac therapy, digitalis enjoys by far the greatest popularity in this country. There is not as yet absolute agreement on its mode of action in congestive failure. We know that it lessens the conductivity of the auriculo-ventricular bundle, thus, if given in adequate doses to a patient with auricular fibrillation it will prevent the feeble impulses from reaching the ventricles: Thus the ventricles will be rested and respond better to the more powerful impulses and the general circulation will be improved. This action is best seen in heart failure from mitral stenosis with auricular fibrillation. There is also good evidence that digitalis acts directly on the heart muscle, and increasing evidence that this effect is of value in the treatment of congestive failure. Thus is explained the beneficial effects of digitalis on congestive failure when the rhythm is regular. British authors, referring to Mackenzie's teaching, place the greater emphasis on the effect on the auriculo-ventricular conduction in auricular fibrillation. American authors as a whole consider the effect on the myocardium more important. In his latest paper, Parkinson finds that the effect of digitalis on heart failure is most marked in the presence of auricular fibrillation.

Digitalis does not directly slow the heart rate when given in therapeutic doses. Any slowing of the regular heart in congestive heart failure treated with digitalis will be caused by the general improvement in the patient's condition rather than by a direct effect on the sinus node. Excessive slowing of the heart may result from a toxic effect on the sinus node, bigeminal pulse with very faint extra beats, or finally, but rarely, from heart block. Digitalis has no effect on the sinus node in sinus tachycardia from causes other than congestive failure, unless it be given in toxic doses.

Digitalis has no diuretic effect except indirectly through its action on the heart.

Some years ago other drugs with a digitalis-like action occupied a prominent place in the pharmacopeia, best remembered are squill, strophanthin and ouabain. The two last named are still much used respectively in Germany and France. Recently two other substitutes have been offered in this country—thevetin and urginin. There is no evidence that any of these drugs has an effect superior to that of digitalis when this drug is given in adequate amounts. They do, however, have a place, when the patient shows marked intolerance to digitalis.

For many years the tincture was the favorite preparation of digitalis but within the present decade the powdered leaf has become almost universally accepted in cardiac clinics. Once standardized it retains its strength indefinitely and the dosage can be more accurately measured than with the tincture. Of the various preparations of powdered leaf none is of proven superiority, any preparation backed by a reliable drug house may be used.

Opinions vary as to the degree of failure requiring the use of digitalis. All agree that it should be used when edema is manifest but this is a relatively late symptom of heart failure. In my opinion increasing dyspnea on effort, increase in heart rate, rales at the bases of the lungs, a persistent cough or insomnia from pulmonary congestion are indications for energetic digitalis therapy. When the patient is seen in early failure, digitalization may be slow; .1 gram of the powdered leaf three times a day may be enough; but when heart failure is advanced the administration of digitalis should be faster.

About twenty years ago Eggleston showed that the optimal amount of digitalis which could safely be given in congestive failure is much larger than was formerly believed. He then suggested a rapid method of complete digitalization, the amount of digitalis being calculated according to the patient's weight. The Eggleston method has generally resulted in the adoption of much larger doses of digitalis than were formerly used. However, many clinicians hesitate to give the full doses recommended by Eggleston, for it is often difficult to make sure that the patients have not already received some digitalis, and once the drug is absorbed there is no way of neutralizing its toxic effects. Both the toxic and the therapeutic response to the drug vary with the individual. Some persons are hypersensitive to the drug and in them the full Eggleston dose would be dangerous. Finally, the very large doses of digitalis are unnecessary for almost every patient with congestive failure will recover just as well if digitalization is extended over a few days.

Patients with congestive failure who presumably have received no digitalis recently, may be digitalized as follows: Within the first twenty-four hours the patient receives .3 grams of the powdered leaf three times. During the second twenty-four hours he receives .2 grams three times; a total of 1.5 grams over forty-eight hours, or approximately two-thirds of the full Eggleston dose. Further administration of the drug will depend on the patient's response. .2 grams may be given three times a day the following day, or the dose may be reduced to .1 gram. Thereafter, the dose should be continued at .1 gram three times a day and diminished as indicated.



Digitalis treatment aims at the optimal rather than the maximal therapeutic effect. Therefore, the dose should be reduced as soon as the benefits are obtained; even the earliest toxic signs indicate error in treatment.

When compensation is restored, the amount of digitalis must be determined which will maintain it. This, the maintenance dose, should equal the rate of excretion, but this function varies with the individual and the amount of digitalis stored in the body. Usually it is between .1 and .2 grams daily. As it cannot be calculated it must be determined empirically through gradual reduction of the dose, while the patient is being closely watched for the earliest signs of cardiac distress.

The early toxic signs are the appearance or increase in number of extrasystoles progressing to coupling if the drug is not stopped, loss of appetite, nausea and vomiting and marked slowing of the heart rate. Less common signs are xantopia and auricular fibrillation. The electrocardiographic signs are important, especially changes in the T waves which become flattened or even inverted. There has been some discussion regarding the leads most likely to be affected by digitalis. I believe overdigitalization is more likely to render manifest latent changes in any leads rather than regularly to affect a particular lead. Many of the changes may last for a week or more after the drug has been discontinued.

In congestive failure it is rarely necessary to give digitalis parenterally. If the patient vomits the drug because of gastric irritability, repeated administration may be more successful. If vomiting persists, digitalis is well absorbed in a starch enema. More prompt effects follow parenteral methods of administration but intramuscular injections are painful and intravenous injections have had serious consequences.

#### DIURETICS

The only certain effect of digitalis, then, is to strengthen the heart action. It is, therefore, well to support this drug with others which will relieve the load on the circulation; that is, diuretics. Simplest of these is the limitation of salt. The manner in which sodium ions aid fluid retention is obscure, but it is well known that limitation in their intake is followed by increase in excretion of fluid. I do not believe it is necessary to carry salt restriction beyond omission of salt at the table and avoidance of salty dishes.

Of somewhat greater importance is the use of ammonium chloride which acts by producing acidosis. The exact mechanisms is not clear, but it seems to lessen the amount of salts absorbed into the tissues, and thus increase the osmotic pressure of the

blood. As ammonium chloride is absorbed, the ammonium is converted into urea, the diuretic effect depends entirely upon the liberated acid radical. Ammonium chloride should be given in sufficient doses—e.g., three gram three times a day. The one important contraindication is renal insufficiency.

In itself ammonium chloride is a rather feeble diuretic, and it is generally used in combination with mercurial diuretics. The effect of these is enhanced by the acidosis which it produces, thus the two drugs act synergistically.

Until quite recently, drugs of the theophylline group were extensively used as diuretics in congestive failure. They act on the glomeruli by increasing filtration. They are, however, not as effective as the mercurials, and their action soon wears off on continuous use. Consequently, they are rapidly yielding to mercurial diuretics which, then are the diuretics of choice in congestive failure.

The mercurials are contraindicated only in severe renal insufficiency (i.e. with N.P.N. above seventy-five mgm. per 100 cc) when they may cause complete suppression of urine. In this connection it must be remembered that in congestive failure the urinary findings may closely resemble those of nephritis without being a contraindication to mercurial diuretics. The older preparations not infrequently produced mercurialism, but this rarely follows the modern drugs. The diuretic effect of this group is very powerful, they act directly on the kidneys, by suppressing tubular reabsorption.

For the last decade salyrgan has held the field; it is efficacious and safe and presents only two drawbacks, it can only be given intravenously and extravasations produce very painful and often suppurative lesions. If the veins are difficult to reach salyrgan administration presents a serious problem. The fear of renal suppression and mercurialism, however, is perhaps somewhat exaggerated.

Within the last few years mercupurin has become a powerful rival of salyrgan. It contains a radical very similar to salyrgan, and also theophylline. Thus, theoretically at least, it combines the effects of the xanthines with that of the mercurials, increased glomerular filtration with decreased tubular absorption, and, in fact, it has proven more potent than salyrgan on direct comparison. It has the additional advantage that it can be given in rectal suppositories; unless irritation or ulceration be already present, it has no local effects. This is a marked advantage over salyrgan suppositories which may be very irritating. If, on intravenous administration, some of the drug should escape into the subcutaneous tissues, the local effects are not nearly as severe as after

salyrgan. Salyrgan and mercupurin contain about the same amount of mercury.

In many cases of sudden severe heart failure, especially if associated with pulmonary edema, hypertonic glucose injected intravenously may be useful. The usual amount is 100 cc of fifty per cent solution. This drug has a twofold value—it will increase the osmotic pressure of the plasma and thus help the return of fluid from the tissues and, being readily metabolized, it is valuable nutriment for the failing heart muscle, which, in addition to its hemodynamic handicap, may itself be malnourished from poor circulation. The effect of glucose in these conditions may be dramatic.

### OXYGEN

In advanced heart failure cyanosis may be marked. In such cases oxygen should be administered in adequate quantities. The various tents are now rapidly yielding to the nasal catheter which is simpler to use and much cheaper as it consumes less oxygen.

### INFECTIONS

Finally, to complete the discussion, the part played by infections in precipitating heart failure should be considered. The treatment of congestive failure is greatly influenced by its immediate cause, and if this can be removed, the recovery may be facilitated. Respiratory infections are here most important: Sinus infections, bronchitis and pneumonia should all be energetically treated. In fact, pulmonary congestion, pulmonary edema and pulmonary infection often interlace and so form a vicious circle that separate treatment of the various factors is impossible. The advances in the treatment of respiratory infections, including pneumonia, may well include improvement in treatment of congestive failure.

### PROGNOSIS

There are many ways of gauging the effect of treatment. In the early stages the weight curve is most valuable and as edema is a most important part of congestive failure the advance or retrogression thereof will naturally be of most immediate value in evaluating the patient's progress. The pulse rate or apex rate are also useful though they must be studied with due consideration to other factors which may affect them. In auricular fibrillation in arteriosclerotic heart disease a slow ventricular rate may be due to arteriosclerotic auriculoventricular block, and following digitalis, the rate may be slowed while edema still persists. Such patients particularly need diuretics in addition to digitalis, and they, furthermore, have a poorer prognosis than those who can be controlled with digitalis. So, while the heart rate is a most valuable guide in estimating the de-

gree of improvement and prognosis in congestive failure, it must be observed with due regard to the entire clinical picture.

The blood pressure is of little value in estimating progress of congestive failure for it behaves according to no set rule. Often the pulse pressure is low, but the diastolic pressure is not a good guide to the degree of edema. The arterial pressure sometimes falls in heart failure, but it may remain high; in hypertension even very high. This observation is important for it must mean that heart failure is not always caused by loss of myocardial strength, but rather by a disproportion between this factor and cardiac work. In fact, sometimes, the blood pressure is higher during decompensation than later when compensation is restored. The blood pressure, therefore, is too irregular in its behavior to indicate the effects of treatment on heart failure.

As dyspnea and orthopnea are signs of myocardial embarrassment, so their diminution or disappearance are signs of recovery. Probably this sign is most accurate and parallels most closely the course of congestive failure. Closely related to the study of dyspnea is that of vital capacity, in fact the two are so closely associated, that little additional information is obtained from detailed studies of the latter.

Also the circulation time of the blood has been studied in relation to congestive failure, it is slowed, roughly, in proportion to the severity of the failure. While the determination of the circulation rate is relatively simple, it has not been found to yield enough information to compensate for the extra trouble of performing the test.

Finally, venous pressures have recently been measured directly by very simple technique. The usefulness of the test is proven by its increasing application. It is difficult to conceive of congestive failure without increase of the venous pressure, and probably it forms the most delicate method of measuring the change in degree of congestion. Its greatest value, however, continues to be in differential diagnosis.

To sum up, the effect of treatment on congestive failure is best observed by changes in respiration, by disappearance of edema with corresponding decrease in weight, by return of the heart rate to a normal level, and by special diagnostic procedures, of which venous pressure probably is the most delicate.

The benefits to be expected from the treatment of congestive failure have not been exactly determined. Heart failure is a progressive condition which in spite of all treatment will claim the greater part of sufferers from heart disease. The extent to which treatment will increase life expectancy has, I believe, not been proven. Insofar as congestive



failure is precipitated by transient accessory factors, such as infection or overwork, as is often the case in rheumatic or degenerative heart disease, efficient treatment may be of real value, but when the failure is caused by a progressive destructive process, the cause of which is practically unalterable, as in advanced syphilitic heart disease, treatment can hardly be expected to do more than ameliorate symptoms.

On the other hand, energetic treatment may be of very definite value in delaying the advancing process, especially during the early stages, and ameliorating its course when it becomes more advanced. By treating colds energetically, by regular supervision of cardiac patients and by thorough treatment of the earliest signs of congestive failure much suffering may be prevented. In fact, many clinicians believe that less congestive failure is seen in hospitals now than formerly.

### THYROIDECTOMY

Finally, a word should be said about total thyroidectomy for congestive heart failure. This procedure which caused so much discussion some years ago has now almost disappeared. It is true that most times the operation was a partial or total failure, but sometimes the benefits were really striking. Even taking into consideration the spontaneous changes which sometimes occur in congestive failure, I believe that some of our patients were markedly benefited and that the procedure continues to have a definite, though very limited, place in the treatment of congestive heart failure. Thyroidectomy is indicated where heart failure progresses very slowly and fails to respond to the best possible medical treatment. A long pre-operative period of observation is necessary. The presence of very unfavorable changes, such as bundle branch block, form contraindications. It is, furthermore, possible that some of the patients who benefited most from the operation were really suffering from occult or latent hyperthyroidism; this, however, is a much disputed point, which in itself does not affect the value of the procedure.

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300 X-ray Examinations per Hour—A new method of x-raying the chests of large groups cheaply and quickly has been developed in Germany. It consists of photographing the fluoroscopic image on motion picture film. When developed, the strip of film is projected on a screen for interpretation. By this method two physicians, assisted by a crew of 10 men, examined at the rate of 300 per hour, more than 10,000 men during a Nazi party celebration at Nuremberg. The device is not a substitute for the standard x-ray technique but is a means of "screening" and it promises the possibility of examining the whole nation. Holfelder, H. and Berner, F., Muenchen. Med. Wchnschr. 1938, 47.

## IDENTIFICATION AND HANDLING OF THE ALLERGIC NOSE\*

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and

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Nowhere in the field of medical diagnosis is it more important to look at the patient as a whole than when dealing with a nasal problem which may turn out to be allergic. However disinclined one feels toward doing this, there is no successful short-cut substitute. Perhaps there are some intranasal situations which can be diagnosed accurately by looking into the nose, with the rest of the face and body covered, but allergic disturbance is not one of them.

If anything relating to this condition has been established the general nature of its influence must be that thing. Hence, when one is faced with a doubtful combination of local signs and symptoms one must turn elsewhere for aid to their identification. Reaching a decision as to whether allergy is in some degree responsible for given clinical manifestations will often not, even then, be easy.

In January of 1937, one of us (Oaks) published an outline of a physiologic hypothesis or explanation of allergy, based upon ten years of clinical study, and upon a correlation of newer material in physiology. In this application, facts already established appear logically to suggest deduction of other possible facts to fit into the picture. Its simplicity and workability, together with an increased percentage of good results, have been a source of some satisfaction, although some of its important phases are not yet sufficiently clear to assure unflinching success.

Time limitation must confine our discussion of theory to the barest essentials, offered by way of explanation, paving the way for practical application to every day problems. More detailed description and bibliography may be found in the original publication.<sup>1</sup>

The fundamental concept to be kept in mind is that allergic predisposition is a definite pattern in physiology. This pattern is undoubtedly formulated in the individual, or hereditary, arrangement of relationships between endocrines and sympathetico-parasympathetic balance.

Sympathetic and parasympathetic divisions of the autonomic nervous system are normally maintained

\*Read before Pacific Coast Oto-Ophthalmological Society, June 1938.

in a state of balance, or working adjustment between the opposing forces they represent. In other words, katabolic energy of the sympathetic must be properly regulated by anabolic activity of the parasympathetic. This state of balance is profoundly influenced by glands of internal secretion, both in embryonal development and during the postnatal life. From stimulation of sympathetic nerves a chemical substance called sympathin is produced, while agitation of parasympathetic furnishes a counteracting chemical called parasympathin, or originally "vagus substance."<sup>2</sup>

Should sympathetic action be kept in excess of the opposing parasympathetic there results a combination giving high blood pressure, rapid pulse, restlessness, hyperthyroidism, high acid elimination, body temperature at full normal and readily increased, tendency to colds and other respiratory infections, red and active nasal mucous membranes, and sensitiveness to heat. Reversal of the relationship to allow abnormal domination of anabolic factors brings an opposite picture with: Low blood pressure, slow pulse, morning fatigue, hypothyroidism, low acid elimination, subnormal body temperature, relative freedom from infective colds, sensitiveness to cold. Along with this, pallid, wet, sluggish intranasal membranes, which easily become polypoid, are frequently found.

These latter features are characteristic of the allergic individual; and when supported by a history of hay fever, bronchial asthma, food sensitivity, morning sneezing, dermatological phenomena suggesting allergy, migraine, vernal conjunctivitis, or other recognizable evidence of this disease, are not to be mistaken.

Should the above hypothesis prove correct, it naturally follows that any person having a sympathetic combination of factors cannot possibly be allergic. If true, this immediately gives us an important practical advantage in the study of any individual problem. While it is a fact that we have sometimes found difficulty in analyzing combinations which appeared to partake of both sets of factors, they have usually proved to be definitely one or the other, or not due to any demonstrable imbalance in this field.

Careful inquiry into the history yields much useful information. There seems no doubt that allergic susceptibility is familial, just as endocrine disorders are familial, and one should ascertain the presence of such troubles among other members of a patient's family. The person with marked degree of allergy rarely has infective colds, although frequent coryza of allergic origin may be mistaken for them. Morning sneezing, while it does arise from other causes,

strongly suggests allergic inclination. Post-nasal drainage may or may not be present, and may or may not be purulent. Appetite for food is not characteristic, but the frequency of acid stomach, heartburn, or hyperacidity with some flatus is striking. Not uncommonly the patient will be certain he has gastric ulcer, because of severity of symptoms. He may even have had such a diagnosis. In the majority of cases constipation in some degree is present.

Character of sleep varies from deep slumber to moderate insomnia occurring in the latter part of the night. Inquiry will almost certainly elicit complaint of mild or severe morning fatigue, which occurs irrespective of how the individual sleeps. This may be present only when the disease is active and causing symptoms, or it may be a constant thing in a patient who has but mild local manifestations. Sensitiveness to cold is usually admitted, but there may even be mild sensibility to heat instead.

Association between foods, dusts, plants, or other environmental factors, and onset or accentuation of the trouble is of great significance and must not be overlooked. This is unlikely to be discovered in non-allergic persons, although some are subject to poisoning by certain foods and drugs, even in small amounts, irrespective of any demonstrable allergic tendency.

Nasal mucous membranes generally exhibit more or less pallor. In severe cases this is marked and is coupled with wet, sluggish thickening of submucosal tissues, leading to formation of polypi. Where the diagnosis is difficult, as in borderline cases, this is often lacking, and a comparatively red membrane may be found in one frankly allergic.

Cytology of nasal secretions is helpful. During inactive periods of the disease, one is likely to find a mixed cytology with no eosinophiles present. When acute seizures are on, eosinophiles in varying numbers will be found in most cases. Associated with this there is often an increase of eosinophiles in the blood. Their number may be anywhere from two to twenty per cent of total leucocytes.

Systolic blood pressure is somewhat lower than the usual normal. Our observations bear out consistently Blackmar's statement<sup>3</sup> that high blood pressure in an individual with recognized allergy indicates disease of the vascular-renal apparatus. Pulse rate and body temperature, if unmodified by any unusual influence, will be somewhat subnormal as a rule.

We have given up use of skin tests because we feel that, besides being a trial to both patient and physician, they are not justified by dependability of the information they furnish.

Titration of urine acidity gives some additional



help. For this purpose we obtain three morning specimens, and insist that if possible they be in the laboratory within two hours after they are collected. We do not require their being taken on consecutive days unless it is convenient, but we do require that each specimen be collected before any food or drink is taken in the morning. Two per cent alcoholic solution of phenolphthalein is used as indicator, and titration is done with N/10 sodium hydroxide. The allergic person commonly shows a total acidity requiring 0.5 cc. to 1.4 cc. of N/10 sodium hydroxide to neutralize five cc. of urine. Those not allergic will generally run from two to five cc. or more. Specific gravity of the urine is also likely to be lower than usual, running between 1.008 and 1.016.

As a rule, analysis of material resulting from study along these lines will readily classify a patient as allergic or non-allergic. In mild or obscure cases, adoption of a test program of therapy may be necessary to try out one's conclusions. A few weeks will usually settle the question and clear up the diagnosis.

In the handling of allergy, purely local treatment really accomplishes little. General measures will give definite help, and in many will be all that is necessary. Where conditions such as septal deviations or marked hyperplasia are present, combination of local and general treatments is imperative. It appears, however, that surgery except for removal of obstructing polypi, is better delayed until general treatment has reduced edematosis of soft tissues. Often borderline surgery will not then actually be required.

In the dietary, avoiding too heavy use of alkalinizing foods is important. Also these individuals are frequently found to be taking too little of animal proteins. One should urge the increased use of table salt, since allergic patients are invariably low in chlorides. Avoidance of citrous fruits of any kind in any form is to be insisted upon, and in severe cases, tomatoes and tomato juice should be left out. This appears to be of utmost importance. Experience has taught us that these foods are definitely poisonous to allergic patients. Not infrequently one sees a person suffering severely in whom relief is quickly given by this one measure alone.

In medical treatment, one has recourse to three classes of preparations in particular: endocrines, sympathin, and stimulants to the sympathetic system. Among endocrines, thyroid has proved of greatest help so far. Tolerance for this drug, in those with severe allergy, is often high. In its use we try to bring the dose gradually up to the point of tolerance, as shown by increase of pulse rate and restlessness. Occasionally a patient will develop some swelling of ankles before other symptoms appear, upon

which thyroid had best be reduced and chemical stimulants of the sympathetic system resorted to.

Among these benzedrine (Beta-Amino-propyl-benzene) promised much, and is decidedly useful at times. It appears to possess a faculty of augmenting that phase of thyroid action desired. It is tolerated much better by the parasympathicotropic or allergic person than by others. However, the drug must be used with caution even there. We see occasional allergic patients whose noses are kept running and stuffy by their frequent application of the benzedrine inhaler. Yet there are many times when a single use of such an instrument will rapidly terminate an annoying cough of sudden onset, sneezing, posterior nasal drip, etc. that has come up from some allergic alteration in body physiology.

Use of benzedrine internally is more satisfactory as a rule than by any such avenue as inhalation, but the patient should be carefully observed when starting its use, and dosage must be regulated according to individual responses.

With both thyroid and benzedrine, we begin at small dosage and increase to the point of desired effect. Of benzedrine sulphate five milligrams are given before a patient arises in the morning. If more is needed, one dose is given in the early afternoon. Then both may be increased in size if necessary. The benzedrine inhaler is a boon to many a patient in whose problem nasal stuffiness constitutes a prominent and troublesome feature. It appears to act both locally and generally.

Sympathin, which has not yet, so far as we know, been chemically identified, is in our work represented by histidine. This substance appears to fit well into the picture, so far as its clinical effects are concerned. Histidine is also interesting in the response it often arouses. Violent asthmatic seizures have been relieved by it in a few minutes, when repeated injections of adrenalin chloride had failed to show any appreciable effect. It is given as four per cent solution of histidine monohydrochloride in 5 cc. doses, subcutaneously or intramuscularly. Frequency of administration depends upon the individual need. We have given it daily, which appears to be more than even the most violent case requires. Usually two or three doses each week suffice. It is given less often, and finally discontinued as symptoms abate—to be resumed if needed. Often mild cases will not require its use.

Dilute hydrochloric acid by mouth with meals is valuable in many patients. Whether it should be given or not is pretty well indicated by the urine acid titration. Any patient showing a titration of less than one cc. N/10 sodium hydroxide for five cc. urine, in a series titration, is likely to do better on

moderate to large doses of the acid. Occurrence of any burning discomfort after taking it should be considered as indicative of need for reducing the dose or discontinuing it.

Perhaps we should stress the fact that one cannot be certain of striking correct individual dosage of these substances at the start. Every patient should be under reasonably frequent observation for adjustment of the various factors to fit his particular requirements, as brought out by trial. When a suitable program of dosage and frequency has been arrived at, periods between visits may be lengthened.

Cessation of symptoms does not mean that the patient may disregard what has been set up for him. He should be impressed with the importance of following out for a long time instructions laid down. To succeed in this appears to be one most difficult problem in treatment of these people. Use of thyroid, histidine, benzedrine, etc., will eventually become necessary only upon rare occasions for most patients. As a rule, it seems to require one, two, or even three years to establish a better adjustment between sympathetic and parasympathetic systems so there is no marked tendency to recurrence. After that has been accomplished, evident allergy will have become largely a thing of the past for that person, unless some profound disturbance of physiology should upset his balance.

Education of a patient to some understanding of the reason for his trouble is of advantage in gaining his continued co-operation to keep the trouble in abeyance until it has been overcome.

#### BIBLIOGRAPHY

1. Oaks, L. Weston; "A Physiologic Hypothesis of Allergy and Its Effective Treatment,"; *Eye, Ear, Nose And Throat Monthly*, January 1937.
2. Cannon, Walter B.; "Chemical Mediators of Autonomic Nerve Impulses,"; *Science* 78:43 (July) 1933.
3. Blackmar, Francis; "Clinical Biochemistry in the Treatment of Ear, Nose, and Throat Diseases,"; *Laryngoscope* 45:948 (December) 1935.

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Why we "see stars" when we are struck on the head is explained by Richard F. Trump, Keokuk, Iowa, in the June issue of *Hygeia*, *The Health Magazine*.

"The optic nerve, like all others, carries only one kind of sensation," Mr. Trump says. "Whenever the optic nerve is stimulated in any way—by electricity, by touching or by light waves—we have the sensation of vision. When you are struck on the head, the optic nerves or the visual centers of the brain are stimulated so that you 'see' the bright flashes which you call stars."

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A good soap substitute, if the baby has sensitive skin, is a pound of oatmeal or a quart of bran, tied securely in a gauze bag and allowed to soak in the bath water.—*Hygeia*.

## A NEW SEMI-OPEN METHOD FOR REDUCING AND HOLDING SOME FRACTURES

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Since some fractures require open operation with the placement of bands, plates and screws, or pins in order to reduce the fracture properly, together with a secondary operation for the removal of the foreign material after union has taken place, a new method which eliminates the necessity of opening through to some of these fractures for the placement of the above mentioned material is explained and shown in this article. For want of a better name, I call it a semi-open method. It is not an open method in the generally accepted meaning of the word open, neither is it a closed method in the generally accepted meaning of the word closed.

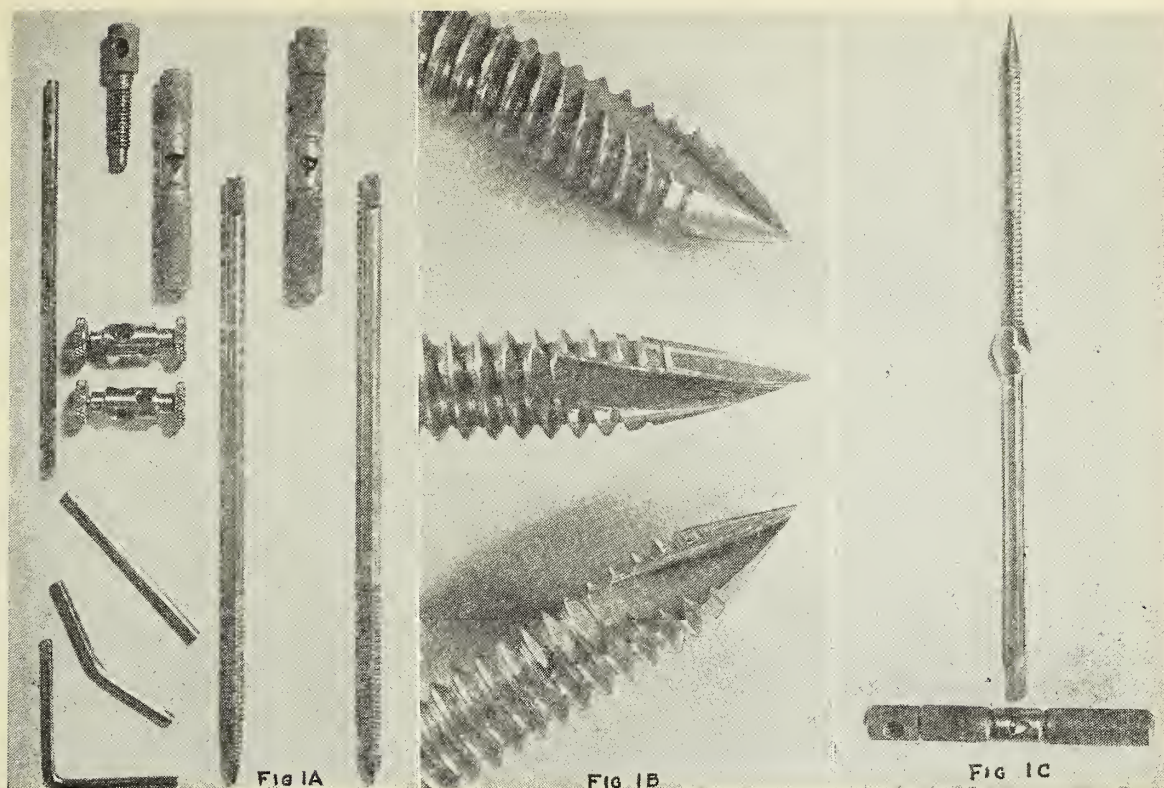
#### DESCRIPTION OF THE INSTRUMENTS

The set of instruments used in this method consists of a pair of universal drilling handles, drills, universal tie-blocks, and standard gauge steel rod. (Figure 1 A shows a pair of drills, handles, tie-blocks and tie-rods.)

Each handle has a triangular opening through its center, which fits the universal shanks of all the various size drills, with a threaded screw in the end which locks the handle to the drill shank.

The drills, per se, are made of stainless steel in order to more readily resist the action of the body chemicals. All the drills except two are paired and graduated in size from one-sixteenth of an inch in diameter for the smaller bones, as the metacarpal, metatarsal and phalanges, up to one-fourth of an inch for the femur. The drill shanks have a universal triangular end which fits into the triangular opening in the handle. Threads run up far enough on the opposite end of the shaft of the drill to allow drilling through the bone, thus threading into the cortex of the bone on each circumference, or 180 degrees from entrance to exit. The drilling end of the drill is so designed that it drills and threads at the same time. In addition, it has a pair of grooves spiraling from the drilling tip up the shaft a short distance; the edges of which have to do with the cutting and drilling. These grooves have a further function in that they pocket detritus bone material as it is cut loose in the drilling operation. (Figure 1 B shows a magnified view of the drilling tip.) Some of the drills have a small shoulder at the junction of the upper end of the threads and the shaft. These are





special drills which are used on such fractures as spiral fractures, where there is a separation of the fragments longitudinally with the bone and one wishes to draw the fragments in snug apposition; or, in case of a fracture of the anatomical neck where one wishes to impact the fracture as illustrated later on. (Figure 1 C shows a drill with shoulder.)

The tie-blocks have two holes through them; one for receiving the shaft of the drill, and the other set at a ninety degree angle to receive the steel rods. At each end of a tie-block is a set screw which locks the shaft of the drill and the steel tie-rod tightly and solidly together in a unit.

The steel tie-rods are  $\frac{3}{32}$  of an inch and  $\frac{1}{8}$  of an inch standard gauge steel welding rod. This steel rod is cheap, easily obtained and shaped with a pair of pliers in case the receiving holes in the tie-blocks are not in the same longitudinal plane. It is also sufficiently rigid to withstand the most powerful muscle pull.

#### METHOD OF USE

The patient is placed under fluoroscopy. After the instruments have been sterilized and the field of operation prepared, the region is placed under local anesthesia, exactly as when one is preparing to insert the Steinman pin or Kirschner wire. A small incision not over .5 cm. in length is now made, barely through

the skin, at a point that will place the drill point sufficiently far from the distal or proximal end of the fracture to allow a firm hold in the cortex for the threaded portion of the drill. Take, for instance, a transverse fracture of the surgical neck of the humerus. (See Figure 1.) The point of the drill should enter the bone about 2.5 cm. back on the shaft from the fracture (in the smaller bones, allow less distance from the site of fracture.) The operator now takes the proper size drill, with handle attached, and inserts the point of the drill into the incision and with a movement as in pronation and supination of the wrist and forearm, he forces the drill down to the bone. It is important not to go in with a complete circular movement, as fascia and muscle will roll up around the drill. When the operator reaches the bone with the drill tip, he holds the drill at a right angle to the bone and begins a rotary drilling movement and drills and threads into the cortex of the bone until the tip of the drill is out on the opposite side of the bone. (See Figure 2.) The operator now places the other drill in the other end of the bone in like manner. (See Figure 3.) He now has a firm threaded hold on the end of each fragment. At this point, before any reduction is attempted, the handles of the two drills are removed and two tie-blocks are slipped on each drill shank and allowed to drop down against

the skin; consequently, they are out of the way during manipulation. The handles are now replaced on the drills. The operator clasps them firmly, and by manipulation, he brings the ends of the bone end to end. (See Figure 4.) He now forces the bone back in line; the part in the meantime is properly supported and receives traction, if necessary, by an assistant. The operator continues to hold the bone in line while the assistant brings the tie-blocks up on the shafts of the drills and locks them in place. After the blocks are locked in place, steel tie-rods are shaped for angulation, if necessary, and slipped through their respective holes in the blocks on the two drills and they, also, are locked in position. (See Figure 5.)

The operator now removes the handles of the drills and applies a cast or splint, as his judgment dictates. A small cork may be incorporated in the cast near the drills for use as a fenestra for observation of the skin wound if the operator so desires. After the cast or splint has been applied, the operator loosens the tie-blocks in order to see if the cast or splint will hold the fragments in alignment. If so, the operator removes the blocks and the tie-rods from the shafts of the drills, again places the handles on the drills, unscrews them from the bone, and withdraws them from the soft parts. If the angle of fracture or muscle pull is such that the cast or splint will not hold the fracture in line after the tie-blocks have been loosened, the operator readjusts his alignment, tightens the tie-blocks, tightens the tie-rods, and leaves the drills in place until he has secured a union. Then he removes the blocks and rods, unscrews the drills, and removes them from the part.

In case the fracture is the type that has a tendency to rotate, as some transverse and oblique fractures do, after the drills have been inserted and locked in position, the operator should hold the fragments in alignment while his assistant applies a cast and incorporates the drills in the cast. This will positively stop any tendency to rotate.

#### METHOD OF USE OF THE UNPAIRED DRILLS

The two unpaired drills are of the larger sizes, and they thread farther up on the shaft than the larger paired drills. They are used to impact and hold fractures of the anatomical neck of the femur and humerus. After a leg or arm has been manipulated until the fragments are in line, the extremity is held in position by the assistant. Then the drill is inserted in the same manner as described previously, the drill is inserted at the proper angle down through the neck, until the drilling end passes through the threads into the dense mass of trabeculae at the junction of the head and neck and the shoulder on the drill at

the outer end of the threads is firmly against the cortex where the drilling tip entered about 1.5 cm. below the vasternus line, in the middle of the outer aspect of the femur. Since the junction of the head and neck receives some of the greatest stress and strain in the femur or humerus, the denseness of the trabeculae at that point is almost as solid as the cortex. Consequently, the drill threads are imbedded in dense bone at that point, as well as in the cortex below the vasternus line of the femur and below the tuberosity of the humerus. By further turning of the drill, the shoulder at the cortex prevents the drill from entering further into the bone. But, the continued turning of the drill draws the fragments closely together or impacts them. In other words, it has the same effect as if you were tightening the nut on a bolt. (See Figure 6.)

This applies to the type of case that comes to us in industry as most of our men are comparatively young, strong, rugged and well knit together. I do not believe this method of impacting and holding a fracture of the femoral neck would work at all in the aged where the femur is nothing much more than a hollow shell. I would not advise its use in such a case.

#### DISLOCATIONS

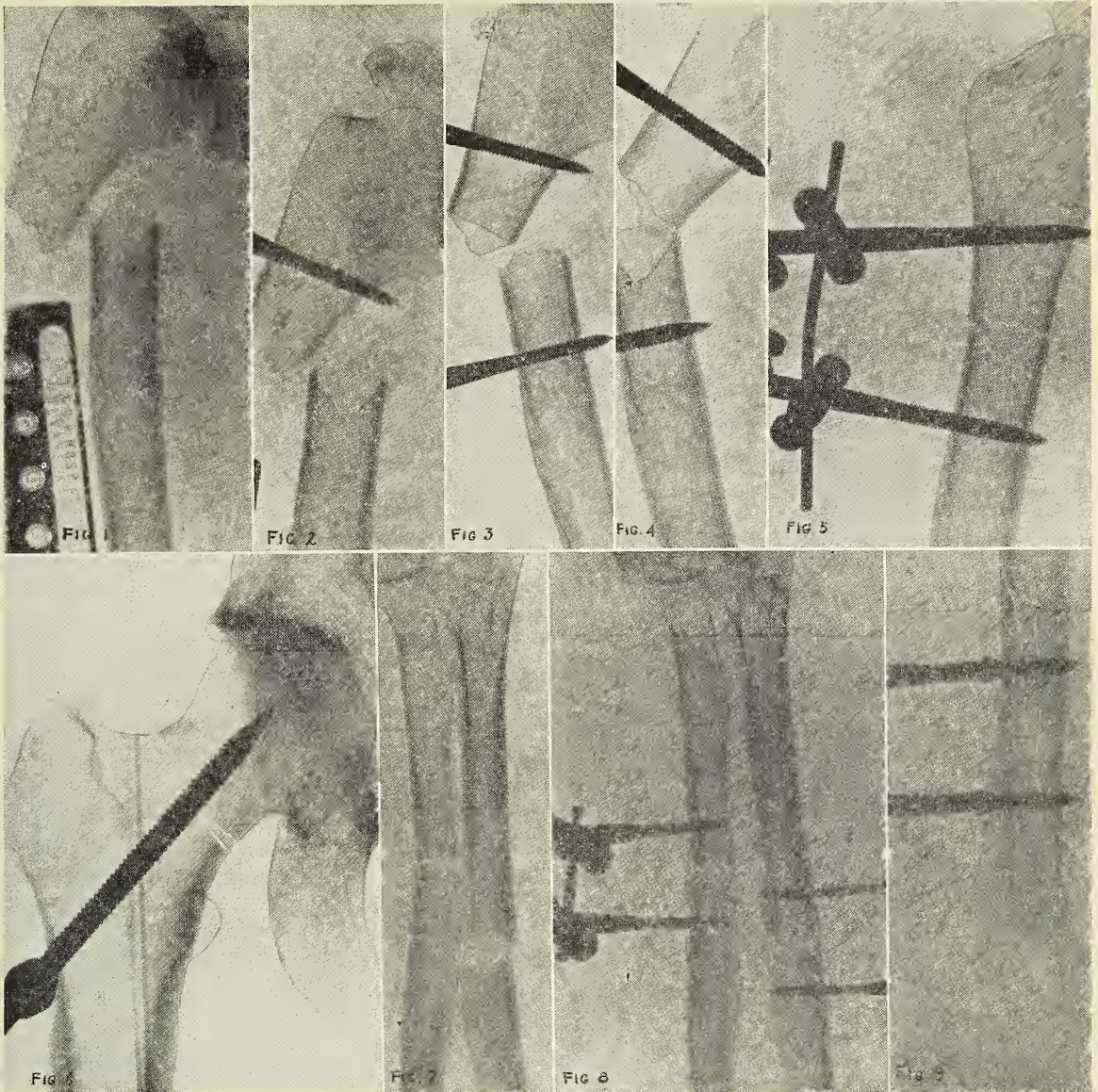
Whether or not these large drills could be inserted into the femur or humerus the same as in neck fractures and used for traction on the head in a case where the dislocation could not be reduced by ordinary manipulation, I cannot say, as I have never had occasion to use one for that purpose. However, one should be able to get a tremendous lateral pull on a head with such a drill threaded as it is into the bone.

Figure 7 shows a typical fracture of the radius and ulna at the junction of the upper and middle one-third. Figure 8 shows how this type of fracture is reduced and held. Figure 9 shows a longitudinal fracture of the lower end of the humerus.

#### THE ADVANTAGES OF THIS METHOD

- (1) It eliminates an open wound reduction in some cases.
- (2) It eliminates a secondary operation.
- (3) Fractures are more readily reduced, for the operator has a solid, positive hold at the distal and proximal ends of the shaft at the site of fracture, together with tremendous leverage on same.
- (4) It eliminates a bulky and awkward cast in certain cases. A light splint is usually all that is required; for the drills, tie-blocks and rods are sufficient to hold almost any fracture in alignment, without heavy extraneous aid.





(5) The soft parts receive less trauma than they do with an open reduction.

(6) Less scar tissue forms; consequently, the time element for limbering up the soft parts is greatly reduced.

(7) The danger of infection is not so great as in the open operation.

(8) The operator has a positive hold on, and can easily manipulate fragments near joints that are out of alignment; these are otherwise difficult to manipulate, due to muscle pull, as shown in Figure 2.

(9) Since the drills are threaded into the cortex of the bone on each circumference, there is no slipping or pulling out of the drills. This does occur at times with nails, wires, and pins.

(10) One is usually able to start passive motion earlier, especially in fractures around the joints. The operator may remove the cast or splint each day as soon as the immediate edema has subsided, give the joint what passive motion he desires, and then replace his cast or splint.

(11) Casts or splints are easily applied under and around the drills and tie-rods.

#### THE DISADVANTAGES OF THIS METHOD

(1) The work must be done under fluoroscopy.

(2) It should not be used on people of advanced years because added damage may be done to the bone during the manipulation, due to the brittleness of the bone and absorption, more or less, of the medulla in elderly people.



(3) Due to the fact that the drills are inserted through a small incision in the skin, there is always the possibility of carrying in an infection.

(4) In the hands of a careless operator, too much lateral leverage may be applied to the 1/16 inch drills causing them to snap off, leaving the stub imbedded in the bone, thus making it necessary to open up to take out the piece of drill imbedded in the bone.

(5) Anyone intending to use this method should obtain some fresh animal bones of various sizes, fracture them, and then perfect himself in the use of these instruments as to drilling, the tremendous leverage he has at his command, manipulation, etc., before attempting his first work on a living subject.

## RUPTURE OF SYMPHYSIS PUBIS DURING SPONTANEOUS LABOR

Chester L. Young, M.D.

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According to Dr. DeLee, rupture of the symphysis is rare, but not so uncommon as is generally believed. Dr. DeLee says that there is usually an inherent weakness of the pelvic girdle due to rickets, osteomalacia, relaxation of capsules, chronic rheumatism, etc., along with traumatism of labor, which accounts for most ruptures of the pelvic girdle. "The shape of the pelvic girdle, such as in a justo-minor, contracted pelvis, and the funnel varieties, predisposes, because the expansile force acts in the narrow transverse diameter". The size of the child's head and shoulders, as well as the force of labor contractions, are also factors. In three-fourths of the cases, the joint is sprung during operative delivery and the others, by the aftercoming head, the shoulders and the vectis. (Boddert).

### SYMPTOMS

The patient will complain of pain over the affected joint. There may be swelling and some discoloration. The patient usually complains of discomfort in the sarco-iliac region, as well as the symphysis. There is often pain, which radiates down the leg and thigh. The legs are moved with difficulty and suggest a partial paraplegia. Bladder and rectal symptoms may be present if the separation has caused injury to them.

### DIAGNOSIS

If the rupture takes place during spontaneous labor, one can usually hear a dull cracking sound

at the time of rupture. The immediate results may cause considerable pain, with symptoms of shock, according to the amount of injury. The separation can be felt, as also can crepitus, along with the movement of the affected ends. The patient's legs lie everted. With movement of the legs there is pain in the symphysis. Walking is of the so-called "duck waddle" type.

The treatment is the same as a symphysiotomy. Spontaneous cure may result with firm union. There may be fibrous union, which allows excessive movement, which can cause a long disability. Infection of the joint and injury is serious. Dr. DeLee says that the mortality of reported cases is thirty-five per cent.

### CASE REPORT

Patient, aged twenty-nine. A previous pregnancy eight years before resulted in normal labor. The child was reported to weigh eleven pounds. During this pregnancy internal pelvis measurements were not taken, since the patient came to the office only a few weeks previous to expected date of confinement. The blood pressure and urine were normal. The patient weighed 205 pounds, measured five feet, seven inches. She had gone two weeks past the expected time of confinement. The onset of labor was spontaneous and lasted two hours. The pains were strong and she insisted on bearing down with them. At the time the shoulders were delivered there was a dull cracking sound. After delivery examination of the perineum revealed a first degree laceration. The next day the patient complained of pain in the region of the symphysis and difficulty in moving the legs. The legs were everted and abducted. The chief complaint was of difficulty and pain when attempting to move the legs or to turn over in bed. A six inch Ace-bandage was used to encircle the pelvis, which gave considerable support. After two weeks in bed the patient insisted on getting up. The walking was of the typical "duck waddle" type. The pubic bones moved considerably with movement of the legs. The crepitus was easily demonstrated. The pubic bones became fixed at about four and one-half weeks and the patient was completely symptomless in eight weeks.

The results of any tick bite may be serious from the introduction of dangerous parasites, but the bite itself may prove harmless.—Hygeia.

It is not as a destroyer of property or as a consumer of food but as a health menace that the rat does the greatest harm.—Hygeia.



## WHY PEOPLE GO TO CULTISTS\*

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The medical profession is sometimes accused of being smug and intolerant of healing practices or suggested methods of organizing medical care which originate from without the profession. Well grounded in scientific thinking and abreast of the latest advances in medical science, the average physician looks with disdain on therapy as practiced by cultists, brands it as unscientific, and cannot understand how the cults can continue to thrive or how they can provide any real threat to organized scientific medicine. The apathy which characterizes the average physician's attitude toward the cults was well illustrated in the recent campaign in this state of one of the non-medical schools of healing to intrude into provinces of healing which the physician regards as his own by right of his scientific medical training. But however much we may view with disdain or attempt to disregard the encroachments on scientific healing made by the various healing cults and by the patent medicine vendors, most of us realize that these unscientific ways of "treatment" enjoy a tremendous following among the public, and that an enormous annual expenditure of money flows into such non-medical channels. It should be a matter of pressing interest to the physician to try to understand how such things can be. In this paper I propose to discuss some of the factors involved. I shall inquire into two general phases of the problem: (1) the character of the power of attraction which cults have for sick people; and (2) the possible factors in the attitude of the medical profession which may turn patients away from physicians to the cultists. In conclusion, I hope to show that the ultra-scientific physician may learn some lessons from his less scientific competitors.

As a background for understanding the attraction which cults have for sick people, I must focus our attention briefly on some elements in primitive thinking. The progress of civilization, whenever it is progress, is toward an ultimate goal of scientific thinking and of utilization in all phases of living of the discoveries of science. If I use the words "science" and "scientific" repeatedly, it is because I must to emphasize their connotations. They derive from the Latin verb "scio," meaning "to know." They pertain to the mature thinking and discovering

and testing of the educated man, in contrast to the irrational, magical, primitive, immature thinking of primitive man, of the child, of immature people, and of many sick persons. Most of the early struggles of civilization to progress were made against such irrational, magical thinking. But although our present civilization has reached a high scientific standard, it must never be forgotten that many of its members lag far behind the front ranks of scientific thinking, nor that each member of society must make his own individual progress from childish magical thinking to whatever level of mature scientific thinking he is capable of.

Magical, primitive thinking involves little of what we psychiatrists call "reality testing." It substitutes wished-for beliefs for scientifically determined beliefs. It projects internal psychological fears onto the environment and then behaves as if the imagined dangers were really existent. Primitive man knew no other kind of thinking; children only gradually become capable of more mature thinking and discard their childish misconceptions and superstitions; and even among us supposedly mature men of science there still may linger, in greater or lesser degree, remnants of this former fantastic, unscientific, superstitious type of thinking. Who among us is so advanced in his thought processes that he has no private superstitions—no beliefs in good and bad omens, no unrealistic lack of recognition of threatened dangers because he strongly wishes to believe he is safe, no pet rituals of doing things in ways that are actually unscientific but to which he clings because he has invested his rituals with some magical power to ensure the successful outcome of his activities? The first step toward understanding the primitive thought processes of those whom we treat, or those whom we should treat but who shun us and rely on cult therapy, is to realize the presence in ourselves of similar magical, unscientific attitudes.

How does this conflict between rational, scientific thinking and primitive, magical thinking affect the situation of choice of cult or physician by a sick person who wants to get well? Every sick or ailing person becomes more childish and tends to rely more on his supposedly forsaken magical beliefs and wishes the more sick he becomes. As a child he felt that his parents were omnipotent. He sought love and security and a feeling of well-being from them. Perhaps they even increased his belief in their magical omnipotence by telling him they would kiss his wound and it wouldn't hurt any more, or by providing the reassurance of their caresses and embraces which made him feel better when he was in pain, even though the pain was not actually lessened

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thereby. If they couldn't institute measures to relieve him they assured him that the doctor they called in would make him feel better; and they had great difficulty in getting him to understand and accept the idea that the doctor might have to hurt him or carry out some frightening procedure to make him feel better. And so, as an adult, when he becomes ill, he experiences a revival of these childish beliefs in magic or of childish fears in the face of which his adult, mature thinking may be temporarily abandoned. He is ripe for the promise of cure of a special patent medicine or of a cultist who speaks reassuringly and authoritatively. Since a considerable proportion of the population remains at the level of ignorant, childish, magical thinking, it is not difficult to see that there will be an enormous response to magical medicines, magical procedures and convincingly spoken reassurances of cure.

From the long range viewpoint, it was actually only yesterday that the most educated persons believed in the curative power of the King's touch for scrofula, of the sacred waters of some healing shrine, of religious conversion and faith. The day of belief in miracles is not past in the realm of healing, and supposedly educated, mature individuals find it hard not to believe in reported cases of miraculous cure of diseases and ailments that did not respond to medical therapy. It was only yesterday, and sometimes even still today, that belief in witchcraft existed—belief in the power of one individual to do damage to another through thinking malignant thoughts, having malicious wishes, using magical methods to bring illness or death to a selected victim. Children indulge in such hostile fantasies and primitive men organized their whole lives on the basis of such beliefs in the power of malignant thoughts to do damage to enemies and on the basis of their own magical methods to combat and undo the magic of the enemy. Even the Bible, whose teachings are espoused in toto by many people, teaches that a thought or a wish is as bad as the deed. It is but a short step from such beliefs to beliefs in the power of good thoughts. And so countless numbers of sick people needing scientific care rely instead on the good thoughts of Christian Science practitioners, or on the prayers and good thoughts of their fellow religionists, shunning the scientific remedies available to them.

The more unscientific the proposal for treatment, the greater is the exploitation of this persistent belief in magic and in the omnipotence of the healer to whom the patient turns for relief. The actual mystery, to most of us, of electricity is exploited in so-called electric treatments, with imposing looking machines. The childish experience of feeling better after

parental caressing and rubbing and the racial experience of belief in the "laying on of hands" is exploited by those healers who promise relief through unscientific manipulative, touching and "rubbing" measures. The primitive belief in magical potions is exploited by patent medicine vendors. In whatever sphere of living there exist fears—fears of pain, fears of blood, fears of being poisoned internally, fears of loss of sexual potency, fears of loss of vision or hearing, fears of loss of locomotive power, fears of dread cancerous growths—one finds unscientific healing practices which provide reassuring promise of cure or relief, and one finds multitudes of people who wish to believe in these promises.

The physician realizes his limitations. He knows where the frontiers of medicine lie. He admits that certain diseases still baffle him and all his fellow-practitioners of scientific medicine. He realizes that for many human ills he has no specific curative drug or procedure and can only provide supportive measures and trust to the self-healing powers with which the patient's body is endowed. For the cultists, however, there are no frontiers, no unknown lands. They promise that their methods will cure all human ills. It is hard for even mature, educated people not to believe these assurances that they wish to believe and not to turn away from the physician, who must honestly give a doubtful prognosis, to the cultist who blithely promises a cure. This is a state of affairs that can be changed only by the slow rise in the cultural level, the slow progress of generation after generation toward a greater acceptance of scientific knowledge and a more complete discarding of primitive, magical ways of thinking.

So much for the first phase of the problem, the power of attraction that magical healing methods hold for sick people who have never outgrown or who have revived, during an illness, primitive beliefs in magic and distrust of science. Let us now examine the second part of the problem, a part about which physicians can do something. I refer to the attitudes within the medical profession which keep the cults alive, which drive people who seek medical aid away from physicians to magical, unscientific healing practices.

It is possible for "scientific medicine" to be partly blind and unscientific as well. As science developed and progressed it attempted to discard all of its previous measures and beliefs which were found to have no scientific rationale. Blood-letting for a long list of ailments was abandoned, and used only occasionally for such diseases for which a scientific basis could be presumed, such as certain cases of hypertension. Cathartic purging for many febrile diseases was abandoned when it was discovered that



this measure had been based on magical belief in internal bodily poisons which were supposed to be flushed out of the system, and that instead certain definite pathogenic agents could be discovered for different diseases, and these agents could be combated scientifically. Similarly, many therapeutic procedures utilized by medicine in the past were discarded in the light of more knowledge and newer discoveries. Medicine became scientific with a vengeance, and almost fanatically purged itself of magical, unscientific elements. Medical schools taught anatomy and physiology and pathology and bacteriology mechanistically and scientifically. The patient became a physiological machine out of order and it was up to the physician to discover the pathology and treat it. If he could discover no pathology, then the patient was certainly not sick, and was to be looked upon with disdain. He was malingering or only imagining that he was sick. Later he was called a "neurotic" and could be dismissed from consideration. This somewhat supercilious, intolerant, supposedly rigidly-scientific attitude of physicians became the pride of the upright medical man and the despair of innumerable patients who sought relief from their ills. What if their temperature, blood count and urine were all "essentially negative" and their bodies yielded no indication of pathology to the scientific examining methods of the ultra-scientific physician? They still felt sick. And in addition, they now began to feel like impostors as physician after physician disdainfully reassured them that they were all right and told them to go home and forget about it. They consumed the placebos and sedatives condescendingly prescribed for them for a while but felt no better. Then they heard of somebody with a somewhat similar set of symptoms who had taken some treatments from a certain cultist and was vastly improved. Science couldn't seem to do anything for them and they had to have relief. It was very comforting for them to hear the reassuring promises of the cultist and they readily undertook his treatments. Strangely enough they often did feel better from his treatments. Perhaps they undertook to tell their physician that the new treatments were effective. If they did, they usually encountered his disdainful smile and listened to his declarations that they were wasting their money. But they knew how they felt and they continued. Most of them didn't even bother to try to "enlighten" their former physician in the face of his attitude toward their complaints.

It is unrealistic and unscientific to attempt to discard and abandon a belief or a set of ideas without trying to understand why these beliefs and ideas existed. And this is just what medical science did

with all of the former ideas and beliefs that it had embraced. It is also quite unscientific to blind oneself to the subjective factors in the patient and attempt to treat him merely as a machine out of order. But subjective factors, psychological factors, were regarded as outside the realm of science. They could not be assayed, measured, titrated, nor auscultated. They were just an intruding nuisance into the objective methods with which the physician was equipped to detect somatic pathology. If patients desperately tried to tell their stories, their troubles, their fears to the physician who was trying to percuss their chests and palpate their abdomens, he terminated the interview as soon as he could without being discourteous in order to get at other patients who were waiting and who really had a "very pretty case of apical tuberculosis" which he had triumphantly detected, or a "beautiful kidney tumor" in regard to whom he longed for an autopsy in order to get the specimen for his shelves. I do not need to point out the obvious effect of such an attitude in driving patients to the cultists.

It is a step of progress which scientifically grounded physicians find it difficult to take, to accept the fact that there is also a science of subjective factors in the patient, a science of psychological processes, and to realize that disturbed emotions can cause complaints referable to organs. They are inclined to view with distrust the opening up of such a wide realm as the psychology of the patient, with all of its intricate complications, its subjectivity, its apparently fantastic quality. Even the scientific researches into the autonomic nervous system and the endocrine glands were distrusted at first because they seemed to pertain to a kind of bodily activity which was subjective and bewildering. The intricate inter-relations between emotions on the one hand and autonomic activity and glandular secretions on the other seemed to be a further plunge into the unknown, apparently away from the tenets of objective science. And when the investigation of the emotions involved attention to dreams and fantasies and "foolish" fears, and there was talk about the unconscious and the effect of childhood experiences, this seemed indeed to be getting into deep water.

But regardless of whether the physician is able to assimilate such subjective factors into his scientific concepts, there remains the reality of a large per cent among his patients of individuals with functional complaints, people who are not malingering, who are not imagining they are sick, but people who are sick, and whose sickness can be understood and treated only in terms of these despised subjective factors. Furthermore, one cannot escape the fact that a patient who has a physical illness is also

psychologically sick at the same time, and needs treatment from both aspects, physical and psychological. A physician who administers the correct treatment for the former but neglects the latter may fail to cure the patient, while another physician who administers the identical treatment for the former may succeed in curing the patient if he also understands and treats the psychological aspect of his patient. Treating this latter aspect may involve nothing more than sympathetic listening to the heightened worries and fears that accompany the physical illness, with appropriate advice and reassurance; it may involve drawing out concurrent conscious personality disturbances and conflicts and pointing out the relationships of these to the physical symptoms; it may involve more delicate probing into the intimate life of the patient and the bringing to light for intelligent, scientific solution of hidden disturbing fears and psychological conflicts. The physician was not taught how to do this in medical school. If, in spite of his training in strict medical science, he preserved his interest in people as people and did not come to regard them as a collection of pathological organs, his own knowledge of the inner psychological life of human beings may have been sufficient so that he could himself handle many psychological difficulties which complicated the physical illness of patients he treated, or which were the main illness of the patient. If his training was such that it shut out all such appreciation of his patients as individuals, each with his own psychological difficulties, then he must learn some more science in the field of human psychology.

And now in conclusion we come to certain aspects of cultists' management of their patients from the study of which physicians may profit. We observe that in spite of our ideals of reaching to higher levels of science, cold science alone, mechanistic science, for want of a better term, will not suffice. There is a science of human psychology, of treating and handling human personalities. This means comprehending, understanding, and managing the magical, primitive beliefs, wishes, and fears of patients who either have never been able to discard these and espouse mature, scientific attitudes, or who, under the stress of illness have fallen back on their supposedly discarded childish ways of thinking and feeling. The cultists are superficially correct in their meeting these needs for magic, for omnipotent assurance of cure, in their taking all of the patient's complaints seriously and sympathetically. Unfortunately, it becomes a case of the blind leading the blind; of magic applied to combat magic, without deeper understanding of the psychological factors involved, and, of course, without appreciation of the

actual organic pathology present in those patients who are organically ill. Physicians must realize that some patients do get relief and do "get well" by cult treatment, simply because their psychological needs are met and satisfied by the treatment given, and must realize that these patients could have been treated successfully by physicians without employment of measures which are unscientific. For all treatment measures which meet the needs of the patient, either physiological or psychological, are ipso facto scientific in the broadest sense of the term. But one must know what he is doing, and must not develop a theory of illness on the basis of the success of the measures used, as, for example, basing a theory of disease and therapy on subluxation of the spinal vertebrae simply because rubbing the back of the patient makes him feel better.

Physicians are, on the whole, too sparing with their reassurances to patients. In trying to be scientifically honest they fail to meet the patient's need to be assured of help against the destructive process within him which has aroused his anxiety. They are too contemptuous of physiotherapy—massage, passive exercise, and the like—and have let the cultists exploit this valuable field. People like to be rubbed and massaged, and they often feel much better after such measures are used, but aside from getting a massage from the nurse when bedfast in the hospital, they find it hard to get such soothing procedures prescribed by physicians. They must go to Swedish masseurs, or to osteopaths or chiropractors, or to spas where healing waters are applied internally and externally and a good rub-down is included. Physicians are, on the whole, too uninterested in or too intolerant of the story of his trouble the psychologically sick patient wants to tell. If he is afraid of going to a psychiatrist for fear that will stigmatize him, he must find the sympathetic ear of his minister, or of a Christian Science practitioner, or of a charlatan "adviser" on personal problems. All of these measures should properly be within the realm of scientific medicine. There is no surer way to eliminate unscientific exploitation of them, and thus to eliminate cults.

Cults must be taken seriously by the medical profession, not only in order to combat their encroachments on medical practice, but also, and more especially, to study and understand the psychological factors which cause people to go to cultists in preference to physicians. In order to progress further toward their scientific goal, physicians must, paradoxically enough, abandon the materialistically scientific attitude which excludes study of emotional factors involved in patients' illnesses and espouse a higher scientific attitude which tries to understand



everything about the patient's behavior and feelings in addition to his structure and physiology. When that goal is reached, every patient, regardless of the unscientific character of his thinking, behavior, and complaints, may expect to find scientific understanding and scientific treatment in his physician.

## ADDISON'S DISEASE, REPORT OF AN UNUSUAL CASE

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Case: Mr. B. B., a white male, age fifty-five, came to the hospital on September 20, 1938, requesting a hemorrhoidectomy. He was admitted on the medical service because he appeared to be cyanotic. On admission the patient stated that he had been bothered by painful hemorrhoids at times for the past two or three years, which bled and protruded on occasion. He had also had some mild vague aching of the joints, with some stiffness, for the past eighteen months.

Direct questioning brought out that five months previously the patient had noticed a brownish discoloration of the hands and wrists, which gradually became darker over a period of about three weeks, but apparently had not changed since. There had been no gastro-intestinal upset, nor had the patient noticed any particular weakness. He had lost twenty pounds during the past five months, which he attributed to financial worry.

The past history revealed amputation of the left foot in 1907, following injury; a fractured skull in 1912; a transitory right facial paralysis in 1912; an appendectomy in 1925; and fracture of the left hip in 1934. The patient had a chancre in 1906, and was given potash and mercury for a time afterwards. He had a rash in 1911 and was given fifteen intramuscular injections and ten intravenous injections of salvarsan. He stated that repeated Wassermanns had all been negative.

Physical examination revealed the patient to be a well developed, very well nourished, white male weighing 185 pounds. The skin of the face, neck, hands and wrists showed a marked brown pigmentation, that of the perineum and axillae slightly pigmented, and that of the scrotum and penis almost black. The pupils were round and equal, reacted readily to light and accommodation. No abnormal pigmentation was noted in the mouth. The neck was negative. The chest was resonant throughout,

no rales were heard. The heart was of normal size, the tones distant. The pulse was ninety-six and regular, blood pressure 92/54. Examination of the abdomen revealed no masses, tenderness, fluid or rigidity. The extremities were negative except for the noted pigmentation and absence of the left foot. Reflexes were normal except for the absence of the right knee jerk. Rectal examination revealed a redundant mucosa and several internal hemorrhoids. The prostate was normal.

Laboratory reports revealed a hemoglobin of eighty-nine per cent, with 4,480,000 red blood cells; white cells 4,450, with thirty-eight per cent lymphocytes, forty-five per cent segmented cells, five per cent stabs, and twelve per cent monocytes. The urine was negative. Both the Kolmer and Kahn were four plus. Pellagra decolorization test was positive. The interdermal tuberculin test was two plus positive.

The patient had no further complaints until 8:00 p.m. of September 22 when he suddenly became nauseated and vomited, and complained of a severe generalized aching. He had a severe chill, followed by a slowly rising fever which reached 104.4 degrees F. by 6:00 a.m. of September 23. The nausea, general malaise and aching persisted. The pulse rate rose to 144. The chest was clear. At 3:00 p.m. the pulse was 156, respirations thirty, blood pressure 36/26, and temperature 103 degrees F. The patient was drowsy and appeared toxic. The percussion note in the entire lower chest was impaired, breath sounds absent, but no rales were heard.

The administration of saline and adrenalin intravenously, and metrazol intramuscularly, raised the blood pressure to 64/20. Cheyne-Stokes respiration appeared, the patient gradually became more stuporous, the extremities cold, and he expired at midnight. There was suppression of urine during the last twelve hours.

### AUTOPSY REPORT

The body is that of a well developed, well nourished, white male approximately fifty-five years of age. The left foot and ankle are absent. The skin of the face, exposed portions of the neck, hands and wrists, elbows, penis and scrotum, and ankle is of a dark, brown walnut hue.

Examination of the thorax reveals a normal amount of fluid in both pleural cavities. The right pleural cavity contains old fibrous adhesions in the upper third of the postero-lateral portion. The lungs show rather marked congestion in the bases. The tracheobronchial lymph nodes are not enlarged or calcareous. Serial sections through both lungs reveal no evidence of tubercles or tumor. The pericardium contains a normal amount of fluid. The heart is

\*From the Department of Internal Medicine, The Hertzler Clinic, Halstead, Kansas.



approximately of normal size, shape and consistency. The heart cavities show no deviation from normal, valves are free of any pathology. The coronary vessels are normal.

Examination of the abdomen reveals the gastrointestinal tract to be essentially negative except for a moderately dilated stomach. The liver is grossly normal except for chronic passive congestion. The gallbladder is filled with normal gallbladder bile, no stones. The spleen is approximately twice normal size; chronic perisplenitis is present. Cross section shows the pulp to be very soft, rather bright red and semi-fluid. No nodules are discernible.

The right kidney is encased in an excessive amount of perirenal fat which includes the suprarenal gland. Section of the mass reveals the fat tissues to be firmly adhered to the suprarenal and the kidney. The kidney is moderately enlarged with numerous retention cysts on the surface, the capsule strips with moderately increased resistance, leaving a very finely granular surface. Section of the kidney reveals the cortex and medulla to be well differentiated, the pyramids easily made out. The pelvis is filled with fat. The left kidney is also encased in a large amount of fat. The whole mass was removed, and in so doing there is left on the posterior lateral wall of the abdomen an oval area measuring approximately 5 x 3 cm., which is of a brownish hue and presents a granular surface. The kidney corresponds grossly to that of the right.

The right suprarenal measures 7 x 5 x 3 cm. The gland is firm and nodular. Section reveals several large and small areas involving practically the whole of the organ, the surface of which is grayish-yellow and cheesy. About three cm. from the hilum of the gland is a node the size of a marble which on cross section shows a grayish-yellow cheesy area involving practically the entire node. All that is found of the left suprarenal gland is a brown plaque of tissue on the surface of the perirenal fat, approximately two mm. in thickness, which corresponds with the area left on the posterior wall of the abdomen when the mass was removed.

The bladder and prostate show no pathology.

The peri-aortic lymph nodes at the level of the right kidney hilum are enlarged and firm. Cross section of one of these reveals a grayish-yellow caseous center.

#### MICROSCOPIC REPORT

The right adrenal gland shows a large, sharply outlined area of fibro-caseous degeneration. The first zone of cells beyond the degenerated area is of an imperfect pallisade arrangement, the nuclei being elongated, with the axis at right angles to the center.

The next zone of granulomatous cell formation is very thin and is made up of fibroblasts, a few round cells, and many cells of epithelioid character. There are a few giant cells of the typical tuberculous type, surrounded by rather badly developed epithelial

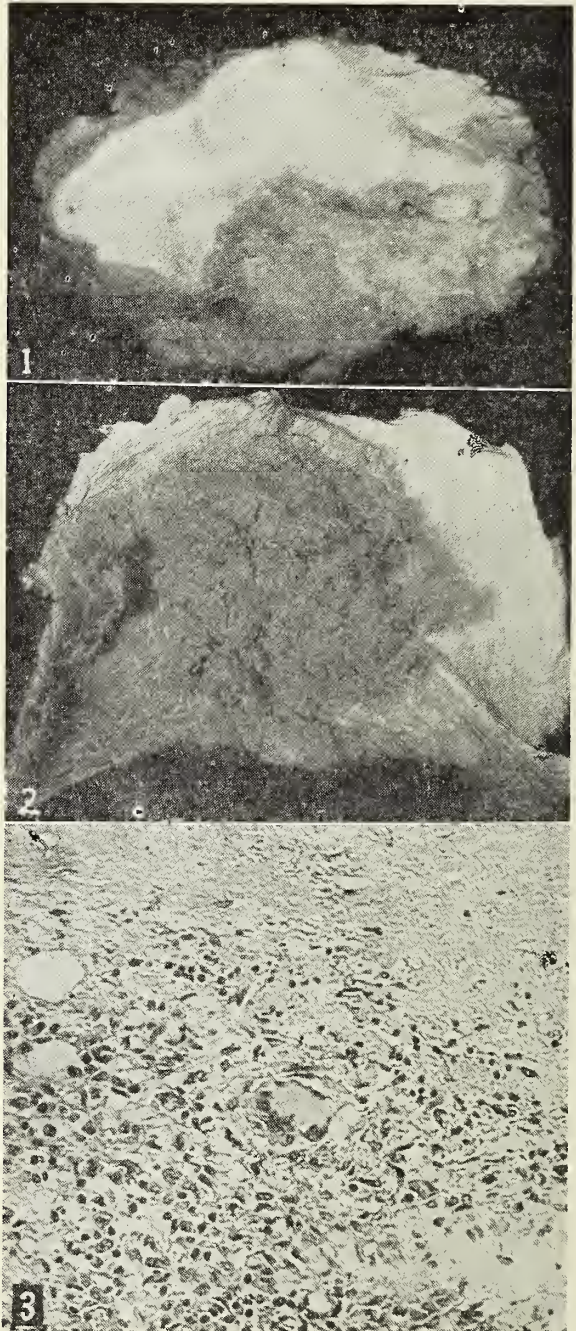


Fig. 1. Cross section of right adrenal gland. Normal structure completely replaced by cheesy caseous material.

Fig. 2. Left adrenal gland split in two. Cortex thin and firmly adherent to capsule of kidney by old inflammatory tissue.

Fig. 3. Microphotograph of section of right adrenal. Caseation necrosis, typical tuberculous giant cell, epithelioid cell proliferation, and a few lymphocytes make up the inflammatory area.



zones. There are no lymphocytes surrounding these tubercles. The blood vessels in this affected tissue show no end-arteritis or other changes. The surrounding fat is unchanged.

The left adrenal gland has been divided by splitting, one half being left in the cadaver. Beneath the capsule only the cortical cells remain, which are surprisingly well preserved. In the capsular wall are a few giant cells identical with those found in the right adrenal gland, but they are not as large or definite.

The peri-aortic gland show exactly the same type of change as that seen in the adrenals and in addition there are small foci of calcification seen. The gland from the hilum of the right adrenal shows the same changes. The spleen shows areas of coagulation necrosis that faintly suggest old and completely matured tubercles. Definite giant cell formation is not present. The only significant change in the kidneys is tubular degeneration and atrophy, especially in the loop of Henle.

Section of the lungs shows an old fibrotic change and chronic passive congestion. The pulmonary alveoli are difficult to make out. Here and there are small areas which apparently are alveoli completely filled by material resembling the basal matter out of which giant cells are formed. No definite giant cell formation can be identified.

The microscopic examination of the other organs is negative for any suggestive findings.

#### **PATHOLOGICAL DIAGNOSIS**

(1) Very chronic fibro-caseous tuberculous degeneration of the adrenal glands with similar changes in the adjacent lymph nodes. (2) Questionable tuberculosis of the spleen and apex of the lung.

#### **COMMENT**

The cardinal symptoms of Addison's disease are asthenia, gastro-intestinal disturbances, abnormal pigmentation, and hypotension. Asthenia is the symptom that is most marked in the vast majority of cases. Pigmentation may precede or follow the appearance of the weakness. Usually there are periods of nausea and vomiting throughout the course of the disease. Death occurs either during a sudden crisis or by gradual debilitation.

This patient presented no evidence of asthenia, either subjective or objective, nor any gastro-intestinal upsets. His general physical condition appeared to be excellent until the day before death. Suddenly, for no known reason, he developed a typical hypoadrenal crisis and died. The diagnosis of Addison's disease was made solely upon the presence of hypotension and abnormal pigmentation. Surgery, had it been done, certainly would have been im-

mediately disastrous to the profound embarrassment of an incautious surgeon.

The pathological picture is that of tuberculous degeneration of the adrenals, without, as is frequently the case, any demonstrable active tuberculous process elsewhere in the body. The type of necrosis, and the absence of end-arteritic changes, make the role of syphilis in the production of the degeneration of the glands doubtful.

## **BILATERAL POSTOPERATIVE PAROTITIS: RECOVERY AFTER SULFANILAMIDE AND ROENTGEN THERAPY\***

Maurice A. Walker, M.D.

Lewis G. Allen, M.D.

Kansas City, Kansas

and

M. J. Owens, M.D.

Kansas City, Missouri

A white man, aged twenty-five, was first seen on September 23, 1938, with the typical symptoms and physical findings of acute appendicitis of about forty-eight hours duration. At operation soon after admission to St. Margaret's Hospital, the distal half of the appendix was gangrenous and had perforated into its mesentery. The appendix was removed and a small soft rubber drain was placed in the pelvis.

Convalescence was entirely uneventful so far as the abdomen was concerned. On the morning of September 28, however, he complained of pain in both parotid regions. By noon both glands were tensely swollen and his temperature and pulse rate had begun to rise. These reached a maximum in the evening of the next day when his temperature was 104.4 F. and pulse rate, 130. Swelling of the parotid regions was also greatest at this time.

Roentgen therapy was begun at noon of September 28, as soon as the condition was recognized. Approximately 125 r units, measured in air, at moderate voltage, was given to each gland on September 28, 29, 30 and October 1 and 3. Sulfanilamide, ten grains, was given every six hours. The swelling began to decrease on October 1, with gradual improvement in his general condition. On October 10 a small fluctuating mass in the right parotid gland was incised. About thirty cc of thick gray pus was obtained from

\* From the University of Kansas School of Medicine.

which a staphylococcus was subsequently grown. This incision healed within a few days.

He was allowed out of bed on October 14 and left the hospital on October 16. An increased firmness of both parotid glands could be felt, more marked on the right, as late as December 31. When examined on February 10, 1939, both glands felt normal.

## SUPPLEMENTARY MEASURES IN THE TREATMENT OF PNEUMONIA\*

Claude D. Head, Jr., M.D.\*\*

Washington, D. C.

Aside from specific therapeutic serum and the newer forms of chemotherapy, there are certain fundamental measures whose merits have been recognized for many years and which today still play a vital role in the outcome of any given case. Even in recent years they have often been the only methods of treatment available to a pneumonia patient, because of the cost of serum, the lack of the specific type at the time and place required, the sensitivity of the patient to serum, or the limited experience of the physician in the proper use of this agent. These important measures include adequate nursing care, proper diet, administration of oxygen, judicious use of drugs, and management of complications.

Before the availability of specific therapy many a doctor said, "If I get pneumonia, give me a good nurse instead of a doctor!" This indicates the high regard held for adequate nursing care. It has been aptly stated that to provide for the patient the maximum rest compatible with adequate nutrition and elimination is the fundamental purpose toward which all nursing procedures should be directed, and that maximum rest for the patient usually means minimum rest for the nurse.<sup>1</sup> In pneumonia, which seriously affects the mechanism by which the body's supply of oxygen is constantly replenished, she should anticipate as much as possible the personal needs of the patient and thus eliminate unnecessary physical activity or restlessness. Good oral care, washing of the face and hands, application of alcohol sponges for the relief of fever and restlessness, and assistance in feeding are but a few of the many aspects of nursing care which contribute immeasurably to the comfort of the patient. Every effort should be made to guard against the development

of bed sores. Frequent changes of linen to insure a smooth, dry and clean bed, variation of the patient's position and regular examination of his back, especially over the bony prominences, are of value in preventing this unfortunate occurrence. The importance of sleep to recovery can not be overemphasized. It is truly "Nature's sweet restorer," and under no circumstances should it be broken for the taking of the pulse or temperature, or even the giving of food. Interruption of sound sleep at 5:30 or 6:00 a.m. by the night nurse for the washing of the face and hands of the patient before breakfast should never be permitted. The nurse should also realize that pneumonia is an acute communicable disease, and should be treated as such with the use of isolation technic. Solicitous friends and members of the family other than those actually taking care of the patient should be excluded from the sickroom, not only to prevent the possibility of transfer of the pneumococcus to them, but also to protect the patient from exposure to still another organism.

In addition to contributing to the comfort of the patient, the nurse plays an important part in oxygen therapy. Knowledge of the indications for its use and familiarity with the devices commonly employed determine to a large extent the success of this method of treatment. If the closed tent is used, the nurse should understand the operation of the various gauges and controls essential to its efficient functioning. She should also know how to care for the patient without unnecessary and prolonged opening of the tent. In oxygen administration by the nasal catheter or the inhaler, it is her duty to see that the device is constantly in place, that the orifices are free from mucus, and that the tube leading from the tank is not kinked. As a precaution against the possible overturning of the tank, it should be strapped securely to the head of the bed. The pressure gauge should be read from time to time, and a new cylinder provided when the one in use is nearly depleted. In oxygen therapy fire is one of the most serious hazards to be avoided. It need only be mentioned that well-meaning but thoughtless visitors have been observed passing matches and cigarettes to a patient within a tent to emphasize the fact that eternal vigilance is the price of safety.

The variability in the duration of pneumonia makes adequate nourishment indispensable to the maintenance of resistance to infection. Patients will have need of more and not less food than when they are well because of increased metabolism resulting from fever (7.2 percent for each degree Fahrenheit that the body temperature is elevated above normal<sup>2</sup>) and from restlessness or delirium. Frequently the total amount required is as high as 3500 or 4000

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\*\*Presented at the Annual Meeting of the Kansas Medical Society at Topeka, Kansas, May 2, 1939.



calories per day. Sufficient readily absorbed food, chiefly carbohydrate, should be supplied to prevent emaciation. Meat and meat extracts are valuable vehicles for the provision of salt and carbohydrates. Fluids should be given in liberal quantities, about 3000 cc. daily, to replace what is lost through high fever, rapid respiration and profuse sweating. This depletion coupled with loss of appetite, nausea and exhaustion may readily lead to severe dehydration. According to individual tastes, the patient may depend upon plain water alone, or may supplement carbonated waters, fruit juices, milk, broth and cooked cereals.

The provision of salt for the pneumonia patient has often been overlooked. The body loses chlorides at the onset of the disease. It has long been noted that the blood chloride level is lowered. Excretion of salt by the kidneys may become almost nil in spite of an apparently adequate intake. There is no satisfactory explanation of where the salt is stored, although experimental work on dogs has indicated that the depot is in the diseased lobe or lung itself. Bullock has stated that the loss of chlorides is harmful and causes interference with the function of the adrenals.<sup>2</sup> It is his practice to give patients about 3 or 4 grams of salt two or three times a day in addition to the salt normally obtained in food. This is given in tablets, capsules, or in solution, and there is seldom objection on the part of the patient.

In few other diseases does the administration of oxygen play as vital a role as in pneumonia. In this disease anoxia, or oxygen want in the tissues, may be attributed to either an increase in the demand for oxygen or to a decrease in its supply. The first condition occurs when fever has produced a rise in the metabolism of the patient. The second is usually associated with a reduction in the alveolar area available for oxygen transfer. This may result from the consolidation of one or more lobes, or from the compression of the unaffected area of the lung by air (as in pneumothorax) or fluid (as in empyema). Prolonged anoxia may be responsible for cytolysis of cerebral cells which may result in permanent damage.

Indications for oxygen therapy are (1) increased pulse or respiratory rate, (2) cyanosis, (3) distention, and (4) pulmonary edema. Some authorities consider it best not to wait until cyanosis has appeared to begin oxygen therapy but to give additional oxygen to a patient with pneumonia when the pulse rate remains above 120 or when the respiratory rate remains above thirty-six. If used early, oxygen should help to prevent cyanosis and distention; if these conditions are already present, oxygen will help bring relief.

Oxygen may be given by chamber, any one of a

number of tents, nasal catheter, or mask. The oxygen chamber where temperature, humidity and concentration of O<sub>2</sub> and CO<sub>2</sub> may be readily and automatically controlled is the ideal method, but its cost is prohibitive except in research institutions and in large hospitals. Tents, if properly applied and intelligently managed, will closely approximate the air-conditioning features of a chamber. To be certain of the O<sub>2</sub> concentration within the tent, however, (in spite of the claims of various manufacturers), it is necessary to test the air within the tent at regular and frequent intervals. This can be readily done by a trained attendant. Many patients object to the closed tent because of claustrophobia. The oxygen chamber obviates this objection. The concentration of O<sub>2</sub> in the chamber and tent under ordinary conditions should be kept at about fifty percent and the temperature at about sixty degrees F.

The administration of oxygen by means of a nasal catheter passed into the nasopharynx is objectionable because the dry gas impinging constantly upon the mucous membrane in one place is apt to be irritating. This method may be used in an emergency if no other is available.

The nasal inhaler<sup>2</sup> overcomes these objections and its low cost and ready availability probably make it the method of choice. The inhaler is a forked or pronged metal instrument with rubber tips leading just inside the nostrils. It is made of malleable brass to permit moulding to the nose and can be obtained in sizes for children and for adults. The hand plate is strapped to the forehead. The oxygen is bubbled through water to add moisture before being brought to the inhaler by rubber tubing. The flow rate is usually set at about four or five liters per minute. This has been found to give an alveolar oxygen concentration of about forty-five percent, and in most instances is sufficient to overcome the usually encountered grades of anoxia.

The advent of pulmonary edema calls for the use of the face mask by means of which oxygen in concentrations of above ninety percent may be administered to the patient for short periods of time.

In the management of the pneumonias, drugs other than those for specific therapy are of definite though perhaps limited value. Time will permit only a brief discussion of those most commonly used. At the onset, when pleuritic pain is severe and robs the patient of much needed rest and sleep, morphine will diminish the threshold of pain and induce sleep. Its depressing effect upon the respiratory center must be considered, and if used at all it should be restricted to the time of onset, administered in small doses (grain 1/6), and not repeated.

(Continued on Page 302)

## PRESIDENT'S PAGE

To The Members of the Kansas Medical Society:

On another page of this issue there will be found a list of the committees for the ensuing year. In appointing these committees we have attempted to distribute the work as widely as possible. First, so that the committee work would not be irksome for any one person, that the load upon the individual would not be too great. Secondly, in order to give to as many members as possible an opportunity to make a contribution to the grand total of organized medicine.

We have, with but one or two exceptions, left from our committees all members of the council and officers of the state society. There is one committee which is a notable exception to this principle. On that committee are found the names of three members of the council. The excuse for this exception is that the membership of the committee has been quite constant for a number of years and they are in the midst of an uncompleted program.

We have attempted to distribute committee membership as widely as possible, both numerically and geographically. We have in the case of each committee charted the committee upon a map of the state in order that in so far as possible all sections of the state may be represented.

In order that the list of committees may be published in the July issue it has been impossible to write each member of the various committees asking that the member signify his willingness to serve. In the years past the membership has always signified willingness to serve and responded to assignments so readily that it lead us to assume that each of you would be willing to serve without having been consulted in advance.

There is one committee that I would like especially to mention and that is the Committee on Scientific Work. We have enlarged that committee and we are going to ask that they assume for this next year some added duties. We are asking them to consider as a part of their duties not only contributions to the program of the state society but postgraduate courses. Throughout the year to attempt to stimulate an increased interest in the scientific exhibits by members at the state society, and to accept as their responsibility the promotion of every possible opportunity for increased scientific work.

Your president,

C. C. NESSELRODE, M.D.,



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## EDITORIAL

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### PRESS RELATIONS

One of the favorite vices of the daily press is the indulgence in coloring news involving the medical profession for the purpose of discrediting doctors and their motives in taking care of the poor. In an almost unanimously conservative daily press it is not uncommon to find headlines which betray the dubious art of editorializing and a not unusual practice to create "color" in a news story at the expense of determined facts. There is an attitude of suspicion and mistrust of the medical profession. Doctors of medicine do not buy advertising space and the business office resents it. It is well known in many localities that it is necessary for the county medical society to buy advertising in order to build up friendship in the editorial rooms of newspapers. A belligerent attitude toward the medical profession grows out of a lack of commercial relationship.

Criticism of the medical profession is chiefly from groups especially interested in radical social change. There is a strange paradox expressed when daily newspapers join in the "putsch" for socialized medicine. When the press attacks or misrepresents the medical profession there is a certain devilish gleam in the minds of those who would destroy private medical practice.

The whole difficulty between the daily press and the medical profession arises from the essential dishonesty of medical advertising. The medical profession is a small minority, powerless to combat unfair tactics upon the part of the press. It is as impossible to shame the press as it is to reform it. After all, the daily press has its foundation in public confidence that it present the truth. With all its superstructure of wealth and commercial enterprise, without truthfulness, the daily press will cease to influence the public.

The medical profession serves essential needs of the population. It has done so before there were newspapers and it will continue to serve. If the press has any function left as a guardian of public welfare it is through intelligent and truthful reporting of

the news and an editorial policy based upon a philosophy acceptable to the public which is constantly learning.

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### JOURNAL INDEX REVEALS VAST SCOPE OF A. M. A. ACTIVITIES

Some conception of the vast scope of the work of the American Medical Association is contained in the semi-annual Index Number (June 24) of the Association's Journal, an editorial in that issue points out, saying that:

"It is recommended particularly that readers consult page 2644 of the index under the heading 'American Medical Association.' A survey of the material listed will indicate the vast scope of the activities of the Association at this time. It is in a sense a review of the work for the first six months of the year.

"Few people realize the information to be derived merely from turning the pages of an index one by one. For example, the relative amounts of material on page 2646 concerned with anaphylaxis and allergy and with androgens indicate the extraordinary development of interest in the latter subject during the period covered by this volume.

"No other medical periodical provides in a six months period the amount of information available through The Journal of the American Medical Association. It is with pardonable pride that we assert that the physician who wants to keep abreast of the scientific, political, economic, social, literary or any other phase of medicine can do so by consistent, thorough reading of this publication."

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### THREAT TO HEALTH

The advertisement of laxatives over the radio has assumed disquieting proportions. As its volume soars to new highs, its quality drops to ever lower levels.

To hear the ecstatic descriptions of the taste, efficacy, and safety of numerous products ballyhooed over the air, one might think that the use of laxatives is normal and entirely harmless. That this

is far from the truth is demonstrated in an article appearing in a recent issue of the Journal of the American Medical Association.

Among 1,000 adult cases of appendicitis occurring in Cleveland between 1931 and 1936, the death rate in the acute suppurative type jumped sharply over the preceding five years because of delayed surgery. The authors of the report—Drs. F. R. Kelly and R. M. Watkins—attribute the fatal delay in seeking surgery "to economic factors and use of home remedies, including laxatives. . . ." In the 1925-1930 series of cases, forty-two per cent tried laxatives prior to medical aid. In the 1931-1936 series, this percentage jumped to sixty-seven.

Dr. Kelly and Dr. Watkins point out that they are not alone in the serious view they take of the unsupervised use of laxatives for abdominal pain. In a report on a series of 306 fatal cases of acute suppurative appendicitis, Dr. J. O. Bower, of Philadelphia, observes that 147 had taken laxatives at the onset of pain. The percentage is 91.6 in another series of 214 patients who died of acute diffuse peritonitis following appendicitis.

This is only one, albeit an extremely serious, aspect of the unsupervised use of laxatives. The development of normal eliminative habits is of primary importance to health, particularly in childhood. To start a child on the laxative habit is a crime against nature. Yet ten or twelve times a day the biggest and best radio stations permit advertisers to urge parents to give their children this or that wonderful cathartic. One tastes like delicious candy; another works like a miracle; a third cements affectionate relations between mother and child. No reason is too inane or fallacious. In all the arguments advanced there is an arrant deception in the implication that the use of laxatives is without harmful consequences.

The laxative habit is one of the serious problems of American public health education. There is little hope of breaking its grip until newspapers, magazines, and radio broadcasting stations develop enough social conscience to reject this type of advertising. —New York State Journal of Medicine, June, 1939.

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## CANCER CONTROL

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### CANCER OF THE OVARIES

Harold V. Holter, M.D.

Kansas City, Kansas

Cancer of the ovaries may be either primary or secondary. The majority of cancers of the ovaries are those which arise in a cyst.

Etiology. This must be given under the various types of ovarian cysts.

Proliferating cysts of the ovaries. They are those cysts which are capable of growing within themselves. There are two types, the pseudomucinous and the papillary cysts.

A. The pseudomucinous cysts contain a jelly-like secretion which is secreted by the lining epithelial cells. These cysts, when they rupture, give rise to the pseudomyxoma peritonae. Mucocèles of the appendix also give rise to this condition. This pseudomucin may be secreted in large amounts and the cyst may rupture spontaneously. The peritoneal metastases secrete and frequently cause mechanical blockage. These cysts rarely undergo malignant change.

B. The Papillary Cysts: They are sometimes known as cystadenoma invertens, and secrete only a small amount of serous secretion. The cells within proliferate and send papillary projections into the cavity of the cyst. These papillary growths reach the opposite wall of the cyst, penetrate the wall, and appear as cauliflower growths on the outside of the cyst. Eventually they may replace the entire cyst, and metastasize and fill the entire pelvis. They frequently become malignant by undergoing malignant change. They frequently are bi-lateral. Grossly, it is difficult to tell whether the papillary cyst has become malignant.

Diagnosis: A rapidly growing single or bi-lateral tumor of the ovary is potentially malignant. Abdominal section should be done. The most common period of time for the development of these cysts, as in most ovarian tumors, is during the years of most active ovarian secretion.

Treatment: The age of the patient will determine to some extent the preoperative use, in ovarian tumors, of intrauterine radium and deep x-ray therapy. In those women at or near the menopause,

\*Presented at the 80th Annual Session of The Kansas Medical Society, May 1-4, 1939, Topeka, Kansas.



it may be advisable to precede operative procedure with deep x-ray therapy. In younger women with ovarian tumors, it is best to operate first, and if the tumor is malignant, follow with deep x-ray treatment.

**Operative Procedure:** Operative procedure should be radical. Bi-lateral salpingo-oophorectomy and hysterectomy should be performed, if the growth is not too advanced. This is because the ovarian malignancies are so frequently bi-lateral. Deep x-ray therapy should follow removal of malignant ovaries.

If the malignancy of the ovary is so advanced that removal is impossible, radium and x-ray therapy is of some value, for the same reasons as stated in the treatment of the corpus cancer.

Solid carcinoma of the ovaries are rare. They may be scirrhous or adenomatous. They infiltrate diffusely.

Adenomas of the ovary develop probably from misplaced tissue of endometrial origin. They may undergo degeneration into adenocarcinomas of the ovary, which are usually bi-lateral.

Dermoid cysts of the ovary arise from undifferentiated somatic cells or embryologic rests in the ovary. Their contents are usually those of the skin elements. They usually contain sebaceous secretion, hair, teeth, cartilage and bone. They may be bi-lateral. They should be removed as soon as the diagnosis is made, because they not infrequently undergo malignant change, and if they rupture, they frequently cause severe peritonitis.

Teratomata are rare ovarian tumors. They are related to the dermoid cyst, but contain all three embryonic layers. They are solid tumors of the ovary, with small cystic cavities. They are malignant and should be removed. X-ray therapy should follow.

Granulosa cell tumors of the ovary are probably embryonic rests of undifferentiated cells. In this type of tumor the cells have a female tendency. If they grow in the child, they produce precocious sex development. In the menopause, they cause a return of the menstrual periods. There is a tendency toward erratic cell growth and malignancy. Therefore the granulosa cell tumor should be removed.

Arrhenoblastoma of the ovary is similar in character to the granulosa cell tumor, except that the embryonic rests of sex cells have a male tendency. There is a suppression of female characteristics. The growth of hair tends to become masculine, the voice deepens, the breasts flatten, and the clitoris enlarges. There is a tendency to erratic cell growth and malignancy. Therefore they should be removed.

Parovarium Tumors are embryologic remnants of the Wolffian body. They are usually broad ligament tumors. They frequently become proliferating pap-

illary cysts and develop the warty cauliflower growths as described under papillary cysts of the ovaries. Since they are intra-ligamentous cysts, they frequently displace the pelvic organs and give rise to early symptoms. As in papillary cysts of the ovaries, they may undergo malignant changes. Therefore the treatment is the same as given previously.

**Secondary carcinoma of the ovaries:** They are usually bi-lateral and are frequently associated with pelvic infiltration of the cul-de-sac. They may be secondary to cancer of the body of the uterus, to the stomach, or gastro-intestinal tract. The Krukenberg tumors of the ovaries are examples of this type. It is important in bi-lateral tumors of the ovary to suspect primary malignancy of the stomach, gall bladder, or gastro-intestinal tract. Intestinal x-rays may be valuable before operative procedure on bi-lateral ovarian tumors. This may prevent operating inoperable metastatic pelvic carcinoma.

**Sarcomas of the ovary** are rare. They are often bi-lateral. They are usually of the firm, spindle cell variety. The treatment is the same as that of carcinoma of the ovary.

**Prognosis:** The prognosis of cancer of the ovaries is poor. Cancer breaks through the capsule early and metastasizes early. Early radical operative procedures, followed by pelvic deep x-ray therapy is the treatment of choice. The five year survival rate is about twenty per cent.

**Conclusion:** Malignancies of the corpus uteri and adnexae require careful history analysis, examination and diagnosis. As in malignancy elsewhere, our hope of cure lies in early recognition of the disease, and in prompt treatment. Proper consultation of the gynecologist, internist, and x-ray therapist will yield best results.

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## EYE, EAR, NOSE & THROAT

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### AN UNUSUAL MASTOID CASE

Perry A. Loyd, M.D.

Salina, Kansas

The patient, a boy age nine years, had always been in good health. His family history was unimportant. He began having pains in and around the left ear, January 10, 1939. His temperature varied from normal to 103 degrees for several days. Swelling and redness behind the left ear began three days after the pain. The drum was only slightly congested, and

at no time before the operation was there a discharge from the ear.

I was very reluctant to make a diagnosis of mastoiditis without more changes in the drum, and discharges and he was treated with heat and aspirin for ten days from the beginning of the pain. A paracentesis for drainage was not indicated since there was apparently no disease other than of the mastoid antrum and cells. From the beginning of his sickness the swelling, pain, and redness increased—one some days less than on others. The swelling behind the ear was that of a typical mastoiditis—the external ear standing out from the head, and the skin being very red. At this time an X-ray presented evidence of mastoid disease as compared with the right or normal side.

Only a small amount of pus found at operation and there was as far as could be determined, no necrosis of the bone, the disease evidently being confined to the mucous membrane. After operation the boy was comfortable and ran a temperature of 100 to 101 degrees for six days. He had no more pain and no longer looked sick, as he had before. On the eighth day he was sent home from the hospital after two days of normal temperature. He had a normal temperature for eight successive days at which time his fever returned and ranged from 100 degrees to 104 degrees, but did not fluctuate much from day to day. Sulfanilamide (24 grains per day) was given thinking there might be a flaring up of the infection somewhere, possibly in the blood stream, although he lacked symptoms of blood stream infection.

It was singular that the boy had no symptoms after the operation except fever. He ate well; he slept well; he felt well. There was no rigidity of the neck; there were no chills. There was no glandular enlargement, and reflexes and eye grounds were normal. The urine was negative, and the chest examination was negative. The throat was slightly red but not sore. A blood test was negative for typhoid, unlulant fever, and blood stream infection. He had a white count of 15,000—hemoglobin fifty-five per cent.

The case was talked over with several doctors, and an internist examined him carefully, but no one seemed to know why the fever continued. It was finally suggested to discontinue the sulfanilamide to see what would happen. This was done and the temperature became normal in sixteen hours, and did not rise again. There was no cyanosis at any time during sulfanilamide administration. In fact, he was sick without a symptom after the temperature went to normal the sixth day after the operation. This seems to have been a mastoid infection without middle ear involvement—a rare case.

This could not have been mistaken for a simple

cellulitis of the mastoid region due to the fact that the x-ray plate definitely showed a change in the region as compared to the right, and pus was found in the antrum.

It is not known why his temperature rose after being normal for eight days following the operation although possibly a mild upper respiratory infection, commonly called influenza, was responsible. A good many of these infections were present in the city at that time. Also the possibility that the continued administration of sulfanilamide was responsible has been considered, especially since the fever came down to normal and remained so sixteen hours after sulfanilamide was discontinued.

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## TUBERCULOSIS CONTROL

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The following extracts from an article by A. E. Jaffin, M.D., Jersey City, New Jersey, which appeared in the February issue of the Journal of the Medical Society of New Jersey, were presented in the July 1939 issue of the pamphlet, Tuberculosis Abstracts, issued monthly by the National Tuberculosis Association.

### CASE-FINDINGS IN PUBLIC SCHOOLS

1. Question—How valid is the tuberculin test? May we assure parents that the positive or the negative reaction is absolutely correct?

Answer—The tuberculin test is one of the most reliable tests that we have for determining whether or not tubercle bacilli have at some time entered the body. If positive, it does not necessarily indicate the presence of tuberculosis, the degree of infection, nor the extent of damage done, if any.

For all practical purposes, exceptions to this statement may be ignored. They should not cause worry to parents.

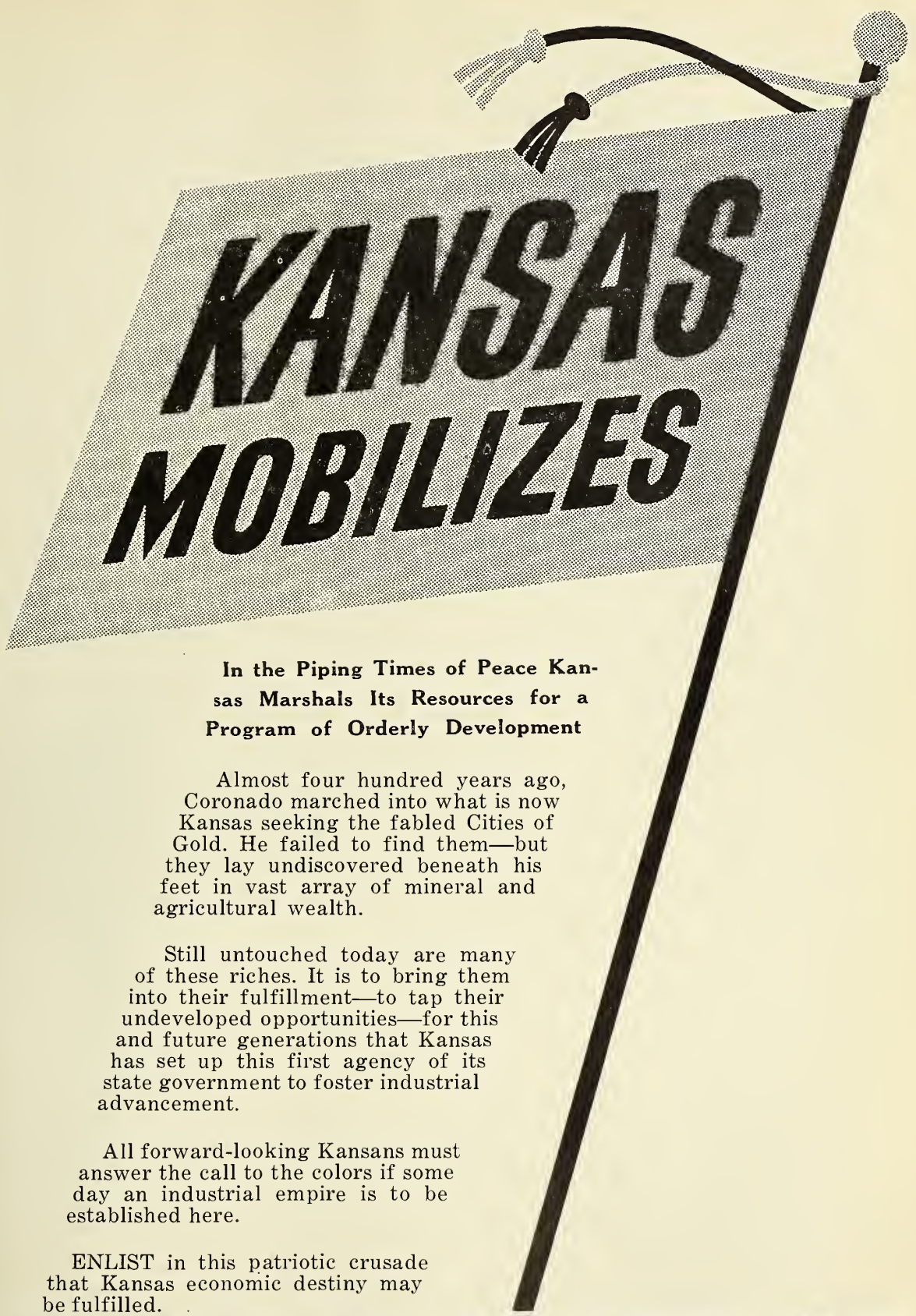
2. Question—Which grades should be tested?

Answer—The ideal plan would be to test children of all grades and ages.

First Grade Pupils—In this group one is likely to find so small a number of infections as hardly to make the effort worth while on a very large scale. On the other hand, experience has shown that very young children with positive tuberculin reactions will serve as leads to a large number of open cases of tuberculosis that were active sources of infection.

Kindergarten—The same may be said of this group.





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High School—The high school age is receiving special attention for several reasons. First, because of the high morbidity and mortality rate known to exist between the ages of fifteen and twenty-five. Secondly, because in the average high school a large percentage of this important age group is available under ideally-controlled conditions. More cases of tuberculous infections are likely to be found in this age than in the lower grades.

3. Question—When is re-testing advisable?

Answer—All tuberculin-negative students should be re-tested at least once a year. All tuberculin-positive students should be re-x-rayed at least once a year, unless something abnormal is found, when the frequency of re-x-raying will depend upon the particular circumstances in each case.

4. Question—Is the Mantoux test so definitely superior to other tests that the question of choice may be ignored?

Answer—The Mantoux test is definitely superior to other tests because:

(1.) It is twice as sensitive as the scratch test of Von Pirquet.

(2.) It is an exact quantitative test.

(3.) The response when positive is more definite, and more prompt than in all other tests.

However, as a second choice, especially in the face of objection to the "needle," the Patch test may be used. The following are the objections to the Patch test:

(1.) It must be kept dry.

(2.) It must not be interfered with by the child.

(3.) Frequently when examined at the end of forty-eight hours, it may be negative, and require four days for a reading.

(4.) Under the best of circumstances it is at least five per cent less reliable than the Mantoux test.

(5.) The greater cost of each test would also become a financial problem if planned for a large number.

5. Question—What is the significance of different degrees of reaction?

Answer—Different degrees of reaction have no significance beyond the fact that they indicate different degrees of sensitivity. This has no bearing upon the question of the amount of infection or disease, and need not concern school administrators or even school physicians. It is better not to confuse the minds of parents with any attempts to interpret degrees of reaction.

6. Question—Should all positive reactors be x-rayed? Are there indications to warrant x-raying of negative reactors?

Answer—All positive reactors should, without exception, be x-rayed.

With reference to negative reactors, an x-ray is not necessary to exclude tuberculosis; but it is frequently advisable for certain special reasons, such as malnutrition, suspicion of heart disease, chest deformity, or recent non-tuberculous lung infections such as pneumonia, or the presence of symptoms of chronic bronchitis or pulmonary disease of non-tuberculous character.

7. Question on the accuracy of the paper x-ray film, is answered by defining the limitations of paper film, appraising its advantages and stating that paper films are quite satisfactory in the "sifting" process or screening out of abnormalities.

8. Question—Is the celluloid film infallible?

Answer—No. There are lesions in the lung so small and so translucent to the ray that they may not be demonstrable in any films.

9. Question—Assuming a positive reaction to the Mantoux, and a negative reading of a paper film, what should be told parents?

Answer—A positive Mantoux reaction, by itself, does not indicate that a person has tuberculosis. "If the tuberculin test is positive (red and swollen), it means only that tuberculosis germs have at some time entered the body. It does not tell how many there are, or if any damage has been done. It should not cause worry to parents.

"If the test is positive, the child's chest should be x-rayed to be certain that no harm is being done in the lungs. An x-ray examination should also be made of every member of the household to learn if the child is being exposed to an open case of tuberculosis. Frequently this may reveal other cases of tuberculosis before the victim is at all aware of the disease. If no one in the family has the disease, search should be made among the child's playmates or others with whom he comes in close contact. It is perfectly safe for a child with a positive reaction to mingle with other children,—for unless there are tubercle bacilli in his sputum, he cannot pass them to others. Tuberculosis often exists in a concealed form in unsuspecting persons, and it is important to make the discovery in order to prevent further spread of the disease."

The parents should also be advised that the tuberculin-positive student should be x-rayed regularly at least once a year so as to detect any evidence of reinfection as early as possible. If the tuberculin test is negative, no x-rays are necessary until a subsequent tuberculin test proves to be positive.

10. Question—Will you outline briefly the following procedure for the average school district?

Answer—After a tuberculosis survey, the parents



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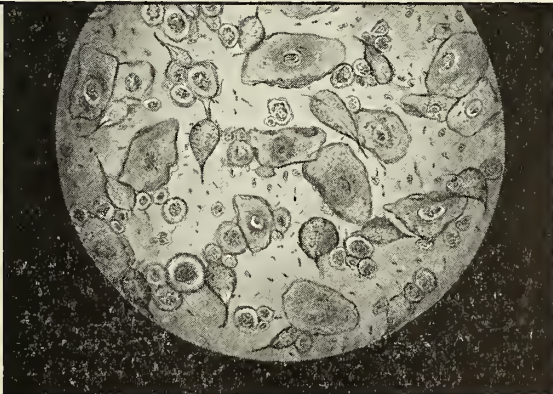
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are advised in a general way as to the results, and instructed to see their family physician for further explanation of the same.

Parents receiving reports to the effect that the Mantoux test was negative are advised of the importance of having the children re-tested annually by their own doctor, as long as they are negative.

In the case of the child who had a positive Mantoux with a negative x-ray, the parents are advised to have the child x-rayed, at least once a year thereafter through their own physician. They are also advised to have all other members of the household x-rayed, and all children under fifteen Mantoux tested.

In the case of those children in whom the x-ray showed some abnormality, the parents are particularly urged to take the report of the findings to their family physician at once. He is to be further informed of the desirability of communicating personally with those conducting the survey, who should endeavor to cooperate with him to the fullest extent on behalf of his patient. For those who cannot afford private service, the facilities of the tuberculosis clinics should be made available.

With reference to the schools, plans are formulated for continuing these surveys so as to test all new admissions each spring, as well as those previously tuberculin-negative.

It is advised that no child should be excluded from school until the x-ray reveals findings that would warrant it and no type of active case, communicable or not, should remain in school—all active cases require treatment.

#### SUPPLEMENTARY MEASURES IN THE TREATMENT OF PNEUMONIA

(Continued from Page 293)

Opinion still differs as to the merits of digitalis in this disease. Certainly its use should be continued for those individuals who required it prior to the onset of pneumonia. Insofar as the remaining cases are concerned, it is significant to note that the routine use of digitalis has been abandoned on a large ward in New York City where hundreds of cases of pneumonia are treated each year.

It has been the time-honored custom to give whiskey to the pneumonia patient, especially to those accustomed to its use and to those with delirium tremens. It is probable that in such cases small doses do no harm, but more reliable sedatives may well be substituted for it. Pickerell<sup>3</sup> has shown in experimental animals that alcoholic intoxication destroys resistance to pneumococcal infections by profoundly inhibiting the respiratory vascular response.

Sedatives which will assure the restless patient an adequate amount of sleep are invaluable. No attempt can be made here to list all the drugs employed for this purpose. It is realized that every physician has a drug or a combination of drugs which in his experience have given good results. A few are suggested because they have been found especially dependable. Avertin given by rectum in doses of 0.6 to 0.8 grams per kilo is very effective and is employed on the wards at Harlem Hospital for controlling delirium tremens. For the milder grades of restlessness, a combination of chloral hydrate gr. XX with sodium bromide gr. LX will frequently bring unbroken sleep for several hours. Paraldehyde drams IV by mouth has also been successfully employed, but may be objectionable because of its odor and taste. Morphine should not be used in delirium, nor should chloral hydrate be used in alcoholics.

There remains one more fundamental measure to be considered in the treatment of pneumonia, and that is the management of complications. Although they are not present in every case, they are significant in that whenever they do occur they lessen the chances of recovery. Complications which are most commonly encountered and most serious in their effects include pulmonary edema, empyema, pneumococcus meningitis, and delirium. Pulmonary edema, however mild, is a symptom of grave importance because its extensive development is usually fatal. As seen in the pneumonias, it is probably a combination of inflammatory and mechanical edema, a response to the inflammation set up by the invading organisms and to the accumulation of excess blood in the pulmonary circulation as a result of failure of the right ventricle. At the same time, serum leaks through the capillary walls into the alveoli. The resulting cyanosis indicates interference with the mechanism employed in respiration and consequent occurrence of anoxia. Unless the anoxia is relieved promptly, death may be expected. Before the condition becomes very severe, temporary relief may be given by administration of oxygen under pressure and by intravenous injection of fifty to 100 cc. of a fifty percent sucrose solution. These same procedures are carried out in severe cases but are likely to be of no avail.

Empyema is to be suspected when the patient's temperature either fails to return to normal after adequate specific therapy, or rises again after crisis or after lysis. Physical examination will frequently reveal diminished or absent breath sounds, absence of vocal fremitus, and flatness over the collection of fluid. A massive empyema will cause a shift of the mediastinum and trachea to the opposite side. As a differential diagnostic point, atelectasis will likewise



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cause diminished or absent breath sounds, absence of vocal fremitus and flatness but if massive enough, will cause displacement of the mediastinum and trachea toward the affected side. Collections of fluid so small that their location by physical examination is difficult or impossible may nevertheless be the cause of a constantly elevated temperature. Careful x-ray examination will usually reveal the position of these small pockets of pus. If possible, they should be drained by aspiration, repeated at intervals if necessary. However, if the pus is too thick for aspiration, or inaccessible to the needle, the possibility of thoracotomy should be considered.

Until the advent of sulfapyridine therapy, pneumococcus meningitis was usually fatal. A goodly number of recoveries have recently been reported following the use of sulfapyridine.

Delirium is a grave omen and its advent is cause for real concern. Its seriousness is indicated by the fact that in a series<sup>2</sup> of 106 delirious cases of type I pneumonia the mortality was 42.6 percent. Anoxia, insomnia, and unrelieved restlessness are factors which contribute to the development of delirium. Sedatives are generally required as auxiliary treatment. Of these the barbiturates, chloral hydrate, avertin, and paraldehyde are preferable. Oxygen for the relief of anoxia is also indicated. Morphine should not be used in delirium.

In summary, pneumonia remains a serious and frequently fatal disease, which will often tax to the utmost the resources of the attending physician. Recent articles on pneumonia have dealt almost entirely with serum therapy or the new drug treatment. These are highly important and every physician should become familiar with the latest developments concerning them. However, in his zeal for bombarding the pneumococcus with antibodies and applying chemical brakes to its growth, the physician must never forget that he is dealing with a sick human being. He must realize too, that for many patients these biological and chemical weapons of defense can not be used. For these patients—for all pneumonia patients—adequate nursing care, proper diet, administration of oxygen, judicious use of drugs, and correct management of complications are likely to remain indispensable factors in the treatment of the pneumonias.

## REFERENCES

1. Langmuir, Alexander D., and MacChesney, Emma H.—The Rationale of Pneumonia Nursing Care. Public Health Nursing, 30: 623-627, November 1938.
2. Bullowa, J. G. M.—The Management of the Pneumonias. Oxford University Press, New York, 1937.
3. Pickrell, Kenneth L.—Effect of Alcoholic Intoxication and Ether Anesthesia on Resistance to Pneumococcal Infection. Proc. Soc. Exper. Biol. & Medicine, 38: 265-267, March, 1938.

## NEWS NOTES

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Dr. C. C. Nesselrode, President, has recently announced the following Committees which will serve for 1939-40:

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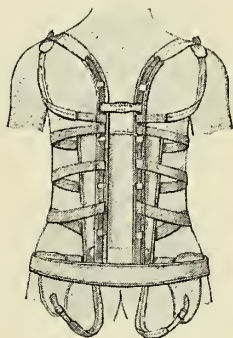
The Kansas State Board of Health met in the office of the secretary, F. P. Helm, M.D., June 27. All members of the board were present, including: George I. Thacher, M.D., Waterville; J. T. Reid, M.D., Iola; H. L. Aldrich, M.D., Caney; R. W. Urie, M.D., Parsons; R. T. Nichols, M.D., Hiawatha; J. F. Gsell, M.D., Wichita; W. C. Lathrop, M.D., Norton; G. A. Leslie, M.D., McDonald; J. L. Lattimore, M.D., Topeka; William E. Scott, Attorney, Kansas City. Doctor Thacher was re-elected president of the board.

The board members expressed their deep appreciation of Doctor Aldrich's twenty years of faithful service as a member of the board. The secretary was also requested to send a letter to Thomas I. Dalton, assistant chief food and



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drugs inspector, in grateful acknowledgement of his twenty years of loyal service to the state health department.

Former paper service regulations were rescinded and new ones passed, stipulating either sanitary methods of washing and sterilizing utensils and dishes used in serving food and drinks, or the use of paper service.

The need of establishing standardized tuberculosis clinics in the state was brought to the attention of the board, and the following resolution was passed:

"WHEREAS, The Kansas State Board of Health, by legislative action, is charged with the prevention of tuberculosis, and is represented in this work by its division of tuberculosis control; and

"WHEREAS, The State Board of Health recognizes the value of modern clinic service conducted for purposes of diagnosis and case-finding as an aid in the eradication of tuberculosis;

"BE IT RESOLVED that the State Board of Health directs the division of tuberculosis control to work out standards for diagnostic tuberculosis clinics, with and acceptable to the committee on tuberculosis control of the Kansas Medical Society, and to present such standards to the State Board of Health for final approval, at a future meeting."

Several other matters pertaining to public health functions in Kansas were considered.

### CANCER COMMITTEE MEETING

A meeting of the Society Committee for Control of Cancer was held in Topeka on July 6. Minutes of the meeting will be published in the next issue of the Journal.

### CONGRESS

Two measures of particular interest and importance to the medical profession are pending in Congress. One, the Wagner bill, S. 1620, which was described in the last issue of the Journal, still remains unacted upon, in the Senate Committee on Education and Labor. The other measure an amendment presented by Senator Wagner to House Resolution 6635, is now pending in the Senate Committee on Finance. The suggested amendment provides that the Federal Social Security Board shall have the power to provide certain medical and institutional services to certain prescribed persons.

All members are urged to familiarize themselves with the contents of these proposals and to communicate their sentiments to Senator Arthur Capper, Senator Clyde Reed, and their Congressman. A particularly interesting and informative description of the Wagner act is to be found in the report of the hearings on the act published in the June 10, 17, and 24 issues of the Journal of the American Medical Association.

### EXECUTIVE COMMITTEE

A meeting of the Executive Committee of Kansas Womans Field Army for the Control of Cancer was held in Topeka on June 29. Dr. C. C. Nesselrode of Kansas City, and Dr. Howard Snyder of Winfield, were representatives of the Society at the meeting. Dr. Frank Rector of Evanston, Illinois, field representative for the American Society for Control of Cancer also attended.

Mrs. Donald Muir of Anthony, State Commander of the Kansas Women's Field Army, presented the next year's contemplated program of that organization for approval.

### NARCOTICS

Judge Richard J. Hopkins of the Federal District Court handed down a decree in the case of Kansas State Osteopathic Association vs. William H. Burke, Collector of Internal Revenue on June 26. The decree which held that osteopaths are entitled to register for narcotic stamps in Kansas is as follows:

#### IN THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF KANSAS

The Kansas State Osteopathic Association incorporated, K. A. Bush, Dale McCoy, L. O. Martin, Raymond L. DeLong, R. Raymond Wallace, Karl M. Pearson, Fred E. Hastings, for themselves individually, and as officers of the said The Kansas State Osteopathic Association, Incorporated,

Plaintiffs,

vs.

William H. Burke, as Collector of Internal Revenue of the United States of America in the State of Kansas,

Defendant.

#### FINDINGS OF FACT AND CONCLUSIONS OF LAW

This is an action to enjoin the defendant William H. Burke as the Collector of Internal Revenue of the United States of America in the State of Kansas, and his aids, servants and employees from refusing to register and issue narcotic licenses and stamps to osteopathic physicians duly licensed to practice osteopathy within the State of Kansas, on the ground that the laws of the state do not permit osteopathic physicians to use narcotic drugs. The action was tried to the Court, partially upon an agreed statement of facts and partially upon oral testimony. Arguments were made, briefs and authorities filed by the respective parties, and under the stipulation of facts, the case stands submitted to the Court for determination. I find the facts as follows:

#### FINDINGS OF FACT

1. The Kansas State Osteopathic Association is a corporation duly organized and existing under and by virtue of the laws of the State of Kansas. K. A. Bush, Dale McCoy, L. O. Martin, Raymond L. DeLong, R. Raymond Wallace, Karl M. Pearson and Fred E. Hastings are the officers and trustees of such corporation and as individuals are practicing osteopathic physicians within the State of Kansas.

2. William H. Burke is the Collector of Internal Revenue of the United States of America in the State of Kansas and as such is the duly authorized agent of the United States of America to register physicians and other practitioners in the State of Kansas authorized to use narcotic drugs in their professional practice. He has refused, is refusing and unless enjoined, will continue to refuse to register osteopathic physicians and grant them permits and stamps for the use of narcotic drugs, including the individual plaintiffs herein, for the reason that he contends that osteopathic physicians are not authorized under the laws of the State of Kansas to administer or use narcotic drugs in their professional practice.

3. Osteopathic physicians practicing their profession in the State of Kansas have been receiving permits and stamps for the use of narcotics since the passage of the Harrison Narcotic Act in 1915.



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4. Osteopathic colleges of good repute during the year 1913 and prior thereto, taught and practiced the use of narcotics. Students in osteopathic colleges were taught the chemistry and toxicology of narcotic drugs. They were taught the effect, dosage, and use of narcotics.

5. The use of narcotics is and was prior to 1931, a necessary part of the practice of osteopathy and was taught and practiced in osteopathic colleges of good repute during the year 1913 and prior thereto as such. Osteopathic physicians could not carry on the practice of osteopathy as taught and practiced in osteopathic colleges of good repute without the use of narcotics.

6. Narcotic drugs are used by those practicing the healing art largely for the relief of severe pain, to overcome restlessness, apprehension, and to prevent the effects of systematic strain and shock, and not as a direct remedy or cure for any disease or bodily ailment.

7. Narcotic drugs are used by osteopathic physicians for their palliative effect, either to relieve the patient from unbearable or unnecessary suffering or to release the tension caused by pain so that osteopathic treatment can be applied. Narcotic drugs are not used by the osteopathic profession as a remedy or cure for any disease or bodily ailment.

#### CONCLUSIONS OF LAW

From the above and foregoing facts, I conclude that:

1. The Harrison Narcotic Act, 26 U.S.C.A. 1383 and 1384 provides for the registration and payment of a fee by physicians, dentists, veterinary surgeons and other practitioners lawfully entitled to distribute, dispense, give away or administer any narcotic drugs to patients upon whom they, in the course of their professional practice, are in attendance. Whether or not osteopathic physicians are lawfully entitled to distribute, dispense, give away or administer narcotic drugs to patients upon whom they in the course of their professional practice are in attendance, is to be determined by the laws of the state in which they are practicing their profession.

2. The General Statutes of Kansas, 1935, Section 65-1201 was passed in 1913 and covers the practice rights of osteopathic physicians. It provides in part as follows:

"Any person not now a registered osteopathic physician of this state, before engaging in the practice of osteopathy in this state shall make application to the board of osteopathic examination and registration, on a form prescribed by the board, for a certificate to practice osteopathy \* \* \* \*. If such examination is passed in a manner satisfactory to the board, then the board shall issue to said applicant a certificate granting him the right to practice osteopathy in the State of Kansas as taught and practiced in the legally incorporated colleges of osteopathy in good repute."

What is included in the practice of osteopathy as taught and practiced in the legally incorporated colleges of osteopathy of good repute in the year 1913, is a question of fact.

3. The use of narcotics was a part of the practice of osteopathy in the year 1913 as taught and practiced in the legally incorporated colleges of osteopathy

of good repute within the meaning of the Osteopathic Practice Act of the State of Kansas.

4. Under the laws of the State of Kansas, osteopathic physicians are lawfully entitled to distribute, dispense or administer narcotic drugs as taught and practiced in the legally incorporated colleges of good repute during the year 1913 and prior thereto.

5. William H. Burke as Collector of Internal Revenue of the United States of America in the State of Kansas, his aids, servants and employees, should be permanently enjoined from refusing to register and issue narcotic licenses and stamps to osteopathic physicians and the individual plaintiffs herein, on the ground that they are not lawfully entitled to distribute, dispense, give away or administer narcotic drugs to patients upon whom they, in the course of their professional practice, are in attendance.

It is probable that Mr. S. S. Alexander, District Attorney, for the Collector of Internal Revenue will appeal the case to the United States District Court of Appeals. In the meantime Kansas osteopaths will be able to secure narcotic stamps inasmuch as the action of the Federal District Court overrules the present ruling of the Narcotic Division that osteopaths are not entitled to register in Kansas.

#### COUNTY SOCIETIES

The Butler-Greenwood County Medical Society met June 9 at the Susan B. Allen Hospital, El Dorado. Dr. John Kleinheksel, of Wichita, discussed the etiology, diagnosis and treatment of diabetes.

The Clay County Medical Society held a meeting June 14 at the Clay Center Municipal Hospital. The main topic of the meeting was a discussion of county medical society public health advertising plans. Visitors attending were: Drs. B. A. Nelson, of Manhattan; G. A. Attwood, of Randolph; Clifford L. VanPelt, of Paola; D. A. Bitzer, of Washington; J. M. Porter, Secretary of The Kansas Medical Society, of Concordia; D. I. Marker of Manhattan; Forrest L. Loveland, President Elect of The Kansas Medical Society, of Topeka; Mr. Clarence G. Munns, of Topeka; and Mr. Ray Breitweiser, Editor of the Clay Center Dispatch, of Clay Center.

Lyon County Medical Society held a meeting June 6, at the Newman Memorial Hospital, Emporia. Dr. G. M. Tice, University of Kansas School of Medicine, presented a paper "Use of X-ray in Endocrinology," and Dr. E. H. Hashinger also of the University of Kansas School of Medicine, presented a paper "Recent Advances in Endocrinology."

The McPherson County Medical Society held a dinner meeting on June 14 at the Hotel McCourt, in McPherson. Guest speakers were: Dr. Ralph S. Casford, Kansas City, who spoke on "Heart Disease"; and Dr. C. C. Wilson, Kansas City, Missouri, who spoke on "Operative and Non-operative Rectal Troubles."

The Southeast Kansas Medical Society held a meeting June 21, in the Hotel Stillwell, Pittsburg. Dr. Lawrence P. Engel and Dr. Ferdinand C. Helwig, both of the University of Kansas School of Medicine, presented a surgical pathological symposium. Dr. Clarence W. Erickson, of Pittsburg, also presented a paper.



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**OBSTETRICS**—Two Weeks Intensive Course October 23rd. Informal Course every week.

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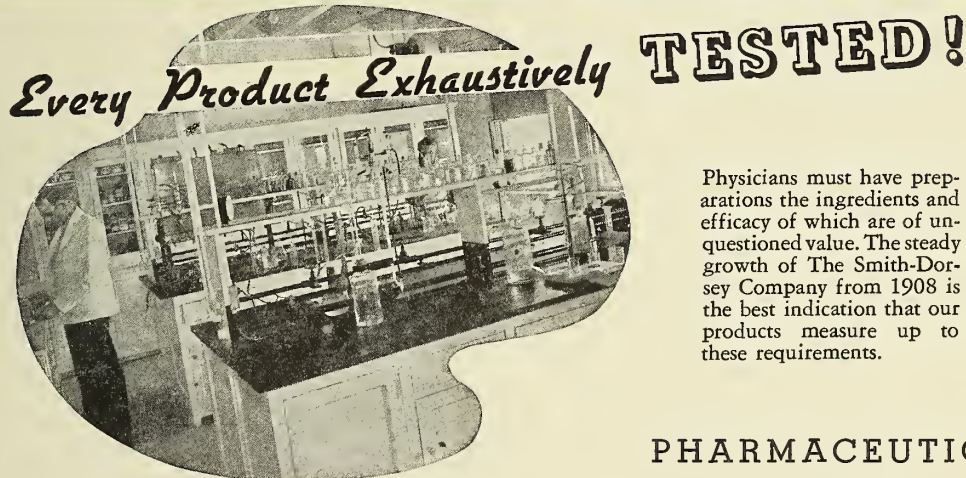
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The Saline County Medical Society met June 8, at the cafe Casa Bonita, in Salina. Dr. Roy Croson, of Clay Center, gave a paper on "Acute Intestinal Obstruction." Discussion of the paper was opened by Dr. L. S. Nelson, of Salina. Dr. W. R. Dillingham, of Salina, presented a paper on the "Use of Prolonged Anesthesia in Rectal Cases." Dr. George Seitz, of Salina, opened the discussion on the latter paper.

The Wilson County Medical Society and the Kansas Crippled Children's Commission sponsored a free orthopaedic clinic at Neodesha, on June 9. Dr. C. B. Francisco, of Kansas City, and Dr. A. E. Bence, of Wichita, assisted in the clinic.

The Washington County Medical Society met June 13 for a dinner meeting at the Hotel Washington. Dr. Roy Croson, of Clay Center, was the guest speaker.

### MEMBERS

Dr. M. E. Pusitz of Topeka, was a guest speaker at the meeting of the American Physiotherapy Association in Denver, Colorado, June 25-30. His subjects were: "Cerebral Palsy—General Considerations" and "Physiotherapeutic Regime in Cerebral Palsy."

Dr. H. F. Craig, Protection, has recently been appointed county health officer of Comanche county.

The National Board of Oto-Laryngology recently announced the certification of Dr. W. B. Granger, Emporia, as a diplomate of that Board.

Dr. G. S. Ortman, formerly of Mankato, has moved to Solomon. He will practice in the office formerly occupied by Dr. Ralph Loudon who has moved to Nebraska.

Dr. A. E. Reed has been named as physician for the Atchison, Topeka and Santa Fe Railroad, at Larned, to succeed the late Dr. C. H. Ewing.

Dr. H. G. Schaumloffel, formerly of Colony, has moved to Williamsburg, where he will open an office. Williamsburg has been without a physician since the death of Dr. G. K. Janes, in February.

Dr. C. O. Anderson, Dr. E. N. Robertson and Dr. E. N. Robertson, Jr., all of Concordia, were recently elected to the St. Joseph Hospital staff at Concordia.

Dr. Robert H. Riedel, director of venereal disease control for the state health department, has returned to Topeka, from Harvard, where he completed nine months post-graduate work.

### DEATH NOTICES

Dr. Henry Jackson Deaver, 73 years of age, died at Sabetha, June 19. Dr. Deaver was born April 15, 1866, at Chapel Hill, Perry county, Ohio, and graduated from Starling Medical College, Columbus, Ohio, in 1892, at which time he came to Sabetha. He also practiced medicine in Goff and Fairview for a few years, later returning to Sabetha. He was a member of the Brown County Medical Society.

Dr. Hal H. Hazlett, 65 years of age, died in Topeka on June 4. Dr. Hazlett was born April 8, 1874, in Newark, Ohio. He received his medical education from the Barnes

Medical College, St. Louis, Missouri. He served in Company F, Thirty-second Infantry of the United States Army, during the Spanish-American War. He was a member of the Christ's Hospital staff more than thirty years and a member of the Shawnee County Medical Society.

Dr. Ralph Harold Hertzler, 52 years of age, died of coronary occlusion in Newton, March 30. Dr. Hertzler was born at Burlington, Iowa, June 14, 1886. He received his preparatory schooling in Iowa, and his medical education at Northwestern University Medical school, Chicago, Illinois. He was among the first Newton men to enlist for over-sea service in the World War, where he was commissioned a captain in the medical corps. He was a member of the Bethel Clinic of Newton and the Harvey County Medical Society.

Dr. Alonzo Woodford Little, 60 years of age, of Kansas City, died June 8, in the Veterans' Administration Hospital at Wadsworth, Kansas. Dr. Little received his medical education from the University Medical College of Kansas City, Missouri. He served in the United States Navy during the World War. He was a member of the Wyandotte County Medical Society.

Dr. William Frederic Schroeder, 48 years of age, was fatally injured in an automobile accident June 12, near Newton. Dr. Schroeder, who was Harvey county health officer at the time of his death, was born at Butterfield, Minnesota, September 6, 1890. He received his medical education at Rush Medical College, Chicago, Illinois, and located in Goessel, Kansas, following his graduation. He later moved to Newton, where he practiced until his death. He was a member of the Harvey County Medical Society.

### MEDICAL BOARD

The Kansas Board of Medical Registration and Examination announces the list of doctors for June 1939, who have been granted licenses to practice medicine and surgery in Kansas.

Eighty-one took the examination, but four failed to obtain the required grade, which leaves a total of seventy-seven who will receive certificates by examination. There were nine applicants for license by reciprocity, and all were favorably passed upon by the Board, making a total of eighty-six who will receive certificates. The list is as follows:

Anderson, Raymond B., Anderson, Robert C., Andreson, Clarence W., Asling, Clarence W., Basham, George L., Bennett, James Dale, Betz, John S., Boody, Robert J., Bux, Robert J., Campion, Woodrow N., Clark, Ray A., Cramer, Guy W., Cushing, Vernon D., Cziraky, Anton., Davis, Christopher G., Day, Hughes W., DeMott, Jack D., Dienger, Bernard C., Donnelly, Bernard A., Dorsey, Elizabeth., Eitzen, Oliver., Filkin, Lawrence E., Ford, Frederick L., Forman, Louis H., James, Frank H., Johnson, Elmer F., Kendig, Thomas A., Ladd, Arthur C., Lane, Henry W., Lee, Carleton H., Lozoff, Milton., Maclean, John A., Mesenheimer, Myron G., Meyer, Donald D., Milligan, Paul R. Millikan, Clark H., Mininger, Edward P., Moon, Roger A., Morrow, Raymond L., McCool, Stanton A., McKee, Leo F., Nash, Francis J., Nothnagel, Arnold F., Olen, George G., O'Neill, Francis E., Pendleton, Raymond L., Petterson, Cecil E., Pruitt, Raymond D., Gage, Maurice., Garber, Pauline., Graves, Louis C., Greer, Richard H., Haas,



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- ☐ Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245—"Pharmacology of Inflammation: III. Influence of Hygroscopic Agents on Irritation From Cigarette Smoke."
- ☐ N. Y. State Jour. Med. 1935, 35-No. 11,590—"Irritating Properties of Cigarette Smoke as Influenced by Hygroscopic Agents."
- ☐ Laryngoscope, 1935, XLV, No. 2, 149-154—"Some Clinical Observations on the Influence of Certain Hygroscopic Agents in Cigarettes."
- ☐ Laryngoscope, 1937, XLVII, 58-60—"Further Clinical Observations on the Influence of Hygroscopic Agents in Cigarettes."

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Louis R., Hagan, Francis J., Haigler, James P., Herman, Allen I., Hood, Thomas R., Hughes, Raymond H., Hunter, Kenneth R., Thompson, Mary E., Thompson, Burl V., Thorpe, George L., Tracy, Herbert A., Trees, Clyde B., Turner, John W., Underwood, Dick H., Voorhees, Gordon S., Reid, James A., Robison, Corbin E., Schneider, Robert W., Sereres, Edgar P., Shanklin, John H., Shircliff, Edward E., Shonyo, Elwyn S., Statland, Harry, Stotts, Charles S., Swann, Clair L., Terry, Jack T., Wade, Frederick E., Wake-man, Everal M., Walters, Byron W., Waxse, Isadore J., Weber, Clarence J., Wieseler, Rudolph J., Willoughby, Jean B., Woods, Harold V., Wyatt, Lisle M.

The license of Dr. John H. Clark, Coffeyville, Kansas, was revoked on a felony charge.

The Board has authorized a 1939-1940 roster, which will be published late this fall.

The examination subjects were reassigned to the various members of the Board.

Dr. M. C. Ruble was unanimously elected to the office of President of the Board for the ensuing year.

The next regular meeting of the Board will be held at the Kansan Hotel, Topeka, December 12-13, 1939.

### F. S. A. PLANS

The Society is preparing a survey of Farm Security Administration plans now operating in the state. It is planned that the survey, which will include a description of the differences of the various F. S. A. contracts in the state and a suggested contract, will be bulletinized to the county medical societies in the near future.

### INDIGENT CARE

A considerable number of county medical societies have recently renewed or inaugurated indigent medical care

plans. Approximately sixty-five counties in the state now have free choice plans operated by their county medical societies.

The Society is investigating thru the Kansas State Board of Social Welfare, possibilities for obtaining Federal and State financial participation in indigent medical plans. In the event several recent Federal rulings make this assistance available, it is possible that present county expenditures for indigent medical care may be considerably increased.

### ANNOUNCEMENTS

Michael Reese Hospital, 29th and Ellis Avenue, Chicago, Illinois, announces a graduate course in Electrocardiography, to be given by Dr. Louis Katz. The course will last two weeks, from August 21 to September 2. Dr. Katz is director of Cardiovascular Research of that hospital.

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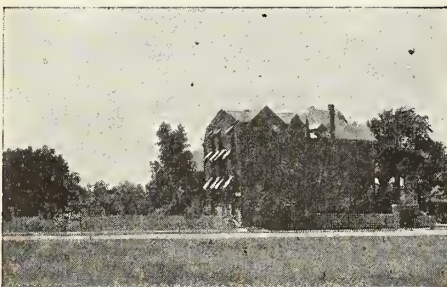
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# The Journal Of THE KANSAS MEDICAL SOCIETY

*Owned and Published by The Kansas Medical Society*

Volume XL

AUGUST, 1939

Number 8

## WHAT THE GENERAL PRACTITIONER SHOULD KNOW ABOUT EAR, NOSE AND THROAT DISEASES

Louis J. Birsner, M.D.\*

St. Louis, Missouri

The subject "What The General Practitioner Should Know About Ear, Nose And Throat Diseases" comes home to me very vividly. It is now about twenty-five years since I began a general routine internship at Alexian Brothers Hospital in St. Louis, and I wish to assure the general practitioner in Kansas that the ear, nose and throat specialist has added a great deal of knowledge to his speciality in this time. I am also sure that every man practicing in the country must often honestly say to himself two things—first—I am not at all sure just what I see in this larynx, or this throat, or this ear, or this nose, and second—I wish that I had more equipment, better equipment and perhaps newer equipment with which to handle this patient.

Again going back to the first problem. How in the world can a man today, within reason, read and keep up with what is being written on the subject of ear, nose and throat diseases? How in the world can he keep vividly before his mind the highly specialized anatomy of these parts? If pathology is there, can he recognize it? He cannot, for the simple reason that he sees it so infrequently. This is not his fault, nor is it the fault of the patient. Therefore, each and every one of us who is practicing general medicine must rapidly take stock with not only ourselves and our conscience, but also with the community in which we practice. By that I mean, in very small communities I believe the man must train himself in the best way in this important field, and in this field he should be able to make a very thorough comprehensive examination of the ear, nose, throat, and larynx.

I purposely include the word larynx as I believe that as a very ordinary country doctor I have always been able to make a very good laryngeal mirror ex-

amination, and I tell you honestly that nothing ever gave me the satisfaction that such an examination gives. I cannot see why each and every one of you, with a very few simple things, with a little reading and a little study, cannot make a very thorough examination of the ear, nose and throat.

Now, in the small community, it is impossible for a man—even one who has a large practice—to see enough pathology to keep himself posted. The same holds true for any other type of practice, he simply never becomes thoroughly familiar with anything. I know that in my nine years in the country I often walked away from an emergency death bed scene and said to myself that I honestly and sincerely would have liked advice, consultation, guidance, and even assistance. Now any man who practices general medicine or a specialty is the same kind of doctor. The word "Specialist" should never have been coined. To me the word is a mistake. One who limits himself to diseases of the ear, nose and throat should honestly and conscientiously have prepared himself, and his training should have been most thorough. It cannot be a matter of weeks—it must be a matter of years, and he should not make his fees high, despite the fact that he may have paid considerably more for his education. When he does this he breaks the bond that should link him to the general practitioner, the ordinary patient and to himself. Simply because one has added knowledge does not give him the right to demand and levy a premium on his services. Again, the general practitioner must not too long delay in referring a patient to a specialist, and when he does so he should not expect remuneration for this reference, for the simple reason that the specialist in turn earns no compensation and receives no money from the other patients whom this general practitioner sees in his daily life.

If I could make an honest suggestion to everyone in general practice I would say—"Purchase two books if you do not already have them in your library". One is the wonderful work of Sir St. Clair Thomson and V. E. Negus entitled "Diseases of the Nose and Throat", published by D. Appleton Century Company in the fourth edition, 1937, and the other is a book by Philip D. Kerrison entitled "Diseases of the Ear", published by J. B. Lippincott

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Company. Take these two books during the long, cold winter evenings and, if you smoke a pipe or like a good cigar, slowly read them; and I can assure you that you will gather an immense amount of information that you can utilize in your daily practice.

If you have not equipped your office to make a complete eye, ear, nose and throat examination, you are far behind the times of this modern day. Every young man who has been trained under me in general hospital work in the past few years will write me and thank me for the special training I have given him in the ordinary routine office work, especially in treating upper respiratory diseases, and mind you, I believe that the early treatment of upper respiratory diseases belongs entirely to the general practitioner. However, I do not see for the life of me how men who have been out for a long period of time in general medicine can keep abreast of this subject without mighty hard intensive reading. I know what it takes for me to keep up with the literature and what it requires of me to keep up with the discussions that we have every Thursday morning at Washington University in St. Louis.

I have just touched the subject of upper respiratory infections. I believe that the following cardinal principles still prevail.

(a) Absolute rest in bed.

(b) Three thousand (3000) cc's of fluids in twenty-four hours; and I might add here that just plain water is far superior to any fruit juices, as far as the human kidneys are concerned. Also, a high caloric diet.

(c) As far as I am concerned, in any upper respiratory infection—excluding pneumonia—I would give my old prescription of Sodium Benzoate, Sodium Citrate, and Sodium Salicylate in equal parts in a very palatable mixture, in sufficient doses according to the age of the patient.

(d) I would give a very light laxative. Today I use nothing but Cascara Sagrada Aromatic—Sharpe & Dohme. I have discontinued entirely all saline laxatives and all vigorous catharsis, as to me it defeats us in two ways—it depletes the body fluids which I think an upper respiratory infection needs most, and secondly, I find that if, later, I use large doses of a chemotherapeutic drug, I feel much safer than if I had used a saline cathartic.

(e) In certain types of influenzal infections, such as we have had this winter, nothing compares with large doses of Aspirin or Empirin, but when this drug is used I feel more certain than ever that the patient should be confined to bed, and should not be permitted—when in a

semi-perspiring condition—to drive to work or be in an office, or to be in the open, for if anyone is going to have a violent set-back it is the influenzal patient full of a coal tar product and subject to rapid chilling of his body; in his case pneumonia is inevitable.

(f) Ephedrine Hydrochloride,  $\frac{1}{2}$  of 1 per cent in a normal saline solution, one dropper full in each nostril three times a day, is all that should be used locally in a nose in an acute condition. Here I would like to say that indiscriminately treating the nose locally in an acute condition is the modern medical crime of general practice. It is often laughable and ridiculous to be called in consultation and to see the bedside table just a mass of about ten or fifteen "good modern radio nose drops". I often wonder if the general practitioner thinks in terms of allergic reactions or chemical irritating conditions that are brought about by endless nose drops.

I have, in a rough way, taken up the idea of what the general man should know about upper respiratory infections, because from this fact one must appreciate today that we are beginning to meet seventy-five per cent of all of the complications which end, eventually, in the office of the laryngologist. From here on out, with indiscriminate hard blowing of the nose, comes the ear complications; the old tooth that has had a lot of fillings—especially in the upper jaw—for no good reason starts going bad and by itself it starts off to infect the body of the superior maxilla and enters the maxillary sinus; or, without any tooth involved, one has one of the accessory sinuses of the nose as a complication. I believe, honestly, that instrumentation, cocaineization, shrinking, or suction of the nose belongs entirely to the man who is capable of handling the whole problem of sinus study.

The fault truly lies more in over-treatment than in under-treatment. In my practice I cannot picture anyone requiring daily sinus treatment in anybody's office anywhere; in any and all circumstances I would say this dictum holds. For one to begin the treatment of sinuses and not to be qualified to complete this job to me just doesn't make sense. I am sure that one with a little knowledge of anatomy realizes very quickly the connection between sinusitis and the human lungs, and also the ears, especially the middle ear and the Mastoid—and going on from there—the lateral sinus and the brain. One cannot help but understand that severe repeated upper respiratory infections lay the foundation for tuberculosis. Therefore, when the patient has repeated upper respiratory infections or he has complications



from an upper respiratory infection, he should be checked by a Laryngologist. His larynx should be looked at; he should have a lipiodal study of his lungs. You must think of bronchiectasis and of lung suppuration. Also, eliminate bronchial cancer.

In all of this I have attempted to sketch to you that the specialist is nothing but a general practitioner who thinks routinely and definitely along certain lines. A good general practitioner knows thoroughly how to handle all emergencies. He, of course, must recognize all the signs and symptoms of a foreign body in the lung of a baby; he must not treat it for asthma when today he can get a good x-ray. He must not treat an allergic asthmatic child for an upper respiratory infection. He must learn to differentiate from the examination of the nasal mucuous membrane exactly what he is treating. You are all familiar with medicine and it is not necessary for me to re-hash in thirty minutes the whole subject of what you and I treat in common every day.

It is necessary for me at this time to say something about the second part of my subject and that is, the office equipment and the instruments that we all should have even in general practice. And here I would like to at least suggest that each and everyone of you learn to use the Ophthalmoscope, the Otoscope, the Post-Nasal Mirror, and the Indirect Laryngeal Mirror. Now this may seem like a large order to each and every one of you, but it is absolutely essential that you know how to make a most thorough examination of the ear, nose and throat. It is no longer excusable that you know absolutely nothing about nasal allergy or nasal sinusitis, or that you will treat a man for hoarseness for any prolonged period of time, even a week, without honestly knowing that this is a simple laryngitis and not a "graveyard cancer". I mean, be able to see the entire larynx. If edema or swelling obscures your view, repeat the examination over and over after cocaineization.

It is very difficult and very hard for me to pass over this subject of equipment without becoming a little caustic. A doctor's office in the country in a very small community should be and must be thoroughly equipped today. It corresponds to an ambulance company dressing station in the War. It can handle all emergencies and really do it right.

Now many of you will say—"How can I afford to constantly keep abreast of the times?". If you look in your community, even in a small community, you will find that the man who goes away and takes a course, the man who cleans up his office, and who adds the latest and finest equipment, usually has the brains to use them. This man also does not make or have the most money. He is usually

just comfortably fixed; however, he is very intellectually happy.

For a long time I was coddled by older men with the idea that this man does not have good hands; does not have the proper touch; cannot feel tissue properly. Therefore, he must resort to the laboratory. To me this is ridiculous. A man is a good doctor or he is a poor doctor, and better facilities to work make a good doctor do better work. A man doing good work is successful. He continues to be a success, and is the type of man who is coming to us today for special work. He is the type of man who eventually leaves the small community and does better work in the larger community. When you go home look to see who does the refractions and the major part of the eye work today in a small city. You will see that an oculist, who should do it, does not. It is being done in the jewelry store, and in the larger city—the department store.

I hear many arguments why men leave small communities to become specialists. Usually I hear such stories as long hours, hard work, and what-not, but as a rule it is an ambitious person who wishes better hospital facilities and better equipment to work with.

In the years to come there will be wonderfully equipped hospitals in every good sized town in this country. Good roads will bring people from the small settlements to these centrally located hospitals.

It is my opinion that the subject of equipment is not stressed enough, nor is the business side of the average office stressed enough, and when these two are combined with common, every-day "horse sense", then one is a good doctor.

The treating of diseases of the ear is to me much more fascinating and much more satisfactory than the treating of the nose and throat diseases. Otology is just exactly what I like to do, and the damage in Otology begins with the early neglect of the patient. Every general practitioner has a critical responsibility when he accepts the child with an acute ear. Right then and there is where the real future loss of hearing begins, and although this loss of hearing is not apparent, it is the beginning.

I am often impressed by the very obvious point in an examination that many doctors in examining a child look at the ear last. As a rule you can, with a little tact, examine both ears very thoroughly and not disturb the child in the least. You can usually examine the nose fairly well without a riot, but the average youngster regularly puts up a struggle when you begin playing around the mouth to get a good look at the throat, or if you make a laryngeal examination. However, it is surprising how much can be accomplished with a little patience and skill.

I am sure that there is not a single general practitioner in the State of Kansas who realizes the role played by an acute middle ear infection in the course of an upper respiratory infection, or in measles, or scarlet fever. Today I follow a policy and that is—I open every ear that I can honestly say to myself is under pressure. In other words, if I see the least bulging of the drum membrane I open it immediately under nitrous oxide or ethyl chloride anaesthesia. That is the least part of this very important thing, the opening of the ear. Secondly, I have the mother or the nurse wash this ear with hot saline in fifteen or twenty minutes as soon as the child quiets down, to dislodge any organized blood clot that can form against the drum. This hot saline irrigation is repeated every four hours for the first three days. Usually irrigate the ear three times a day with hot saline. Dry the ear then most thoroughly and apply a little vaseline to the external auditory meatus. These instructions I give explicitly to the child's mother or the nurse. After ten days I discontinue all irrigation, and for the next three weeks do nothing but dry cleansing of the external auditory canal.

I think that the general practitioner who, in his office, does not check the hearing daily by a few accurate spoken and whispered words, is missing the danger points in the treatment of this acute middle ear. Of course, the temperature and pulse and respiration are important, and the correct analysis of the discharge, but the hearing is most often neglected.

It requires very little skill to make a few simple hearing tests with tuning forks. A C-256 or C-512 is absolutely necessary to make a Rinne and the other bone conduction tests. The Rinne test is a comparison of air with bone conduction. When bone conduction increases over air conduction, or when they are both about alike, then I worry a good deal about the condition of my patient. Usually at this stage the hearing is very low, and I cannot emphasize this point too greatly. Although the patient may recover, that is, his general condition may become perfectly normal, I feel that local damage is so great that in later life such cases have very serious hearing loss.

This is not stressed enough today—the observance of the hearing of the patient, and as I stated before, a few simple tests are all that is necessary at the bedside.

Now, the question of aural discharge, and with this a careful observation of the progress of the perforation itself. The handling of the middle ear cavity is most important. The discharge must daily become less and at no time can it have a foul odor. The moment the applicator has the least touch of necrotic

odor I do a simple mastoid. To me this is a critical time. During this stage it is absolutely essential that the condition of the tonsils and adenoids and the upper air cells must be one hundred per cent cared for and brought into the best possible condition. The patient must be shown how to blow the nose; it must not be left to his judgment how this should be done. I believe more perforations remain due to faulty blowing of the nose, and on top of this a chronic sinusitis. Those two factors will keep an ear going indefinitely.

I often hear a great deal of sarcasm attached to the taking of x-rays, but to me an x-ray film, that is, a film on subsequent days during the course of an acute middle ear and mastoid, gives wonderful information. Progressive destruction of the trabeculae of bone in the mastoid cellular elements to me means mastoid interference. Now this might sound like radical surgery, but in the hands of a skilled operator a simple mastoidectomy carries with it, I would say, an almost one hundred per cent recovery of the patient, and if done properly, promptly, and not too late, should result in a dry ear, with a lifetime of complete serviceable hearing.

One cannot call attention too much in this paper to the areas involved and the appearance of perforations. That really goes into complicated otology, but I usually say to the interne who begins looking at the perforated ear drum that a high perforation and a posterior ear perforation, which involve the bony ring, are serious and usually result in complications.

That more or less leads us up to the picture of complications, and I begin again to try to simplify this thing very much. A chill does not always mean a thrombophlebitis of the lateral sinus; it means that to me until proven that it is not a pyelitis or a nephritis or an acute upper respiratory infection. It may mean erysipelas, but it means to me a blood stream infection until I have definitely and beyond any doubt proven that I am wrong.

It would be ridiculous for me to go into the question of the blood picture, blood culture, chemotherapy, and everything in detail in this paper before a group of general men. I will do that today before the Special Section, but I think that today a general practitioner should know the danger signs of otitic infections. Pain in the area of distribution of the fifth nerve regardless of the side of the head, to me, is bad in an ear infection. It does not always mean a petrous infection, but to me it is a bad sign. Headache, restlessness, and photophobia are very serious signs, and at this stage I would do a lumbar puncture; and I would know for sure how to do a lumbar puncture. I would never do it without a



spinal manometer attached to the needle. By that I mean I get a reading first; then withdraw only a specific amount of fluid according to this reading, and do the laboratory tests with the smallest amount necessary. One can never warn too frequently of the dangers of lumbar puncture.

There are many other signs, especially those that we find in the use of the ophthalmoscope. Papilledema, to me, in an acute ear, regardless of the severity of other clinical findings, is bad. It tells that we are beginning an internal hydro-cephalus, and I begin to think of a blocking of the great veins of Galen. I feel that there is then a deep circulatory and ventricular disturbance. I know that I am in for trouble, serious trouble, and most likely a fatality.

For me to attempt so much in a paper before general men and not to become too technical, of course, is very difficult. In fact, I usually find it much easier to be specific and accurate, and not indefinite.

The subject of chemotherapy is the brightest spot in the past few years in the treatment of meningitis, especially of hemolytic streptococcal origin. Today other and newer drugs are available in the treatment of meningeal infection of the pneumococcus type. To me the giving of this powerful chemotherapeutic drug to the ambulatory patient is criminal, I mean that very definitely. These people need a daily differential blood count, a daily total white count, and a daily and definite understanding of the blood concentration. In the hospital under proper surroundings one need not fear cyanosis or anything else with reference to this drug. This drug is not a cure-all, but properly utilized is a miracle, and it will remain so in the right kind of institutions. However, it will soon go into very disreputable discard if the use of it is continued as men now are trying it. I would warn over and over against the indiscriminate use of this drug without proper bacterial study, particularly in the treatment of acute ear infections. This very winter, however, I have had patients who did not respond to this drug, and when my cultures were checked back carefully I found that I was not dealing with the organism for which this drug was indicated. A recent excellent book on this subject is entitled "Sulfanilamide Therapy of Bacterial Infections" by Ralph R. Mellon, published by Charles C. Thomas.

I wish to apologize for the more or less rambling style of this paper, and in conclusion I would like to stress the following:

(1) Success in medicine and the future of medicine—both in general practice and in a specialty—must come in team work, and I mean

perfect harmony and team work.

(2) There is no such thing as a "Specialist". I usually find that Specialists and Egotists go together and make a good team. I think you have some of them even in Kansas. When you look up these people you usually find they are thinking of the "Great I Am" all the time—both financially and otherwise.

(3) I am glad to have had the opportunity to come to Kansas and give this paper, for the simple reason that thirty-two years ago I came to Kansas to begin my college education at old Jesuit School, St. Marys College, just a short distance West of here on Highway 40; but to us in those days—along the Union Pacific Railroad tracks. If I can give back something medically to the doctors of Kansas, especially to doctors like old Dr. Miller who took care of us at St. Marys when we were sick and injured at the old infirmary, I feel that I have in a measure paid my obligation to the country doctor of Kansas.

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## NEWER KNOWLEDGE OF THE CENTRAL VEGETATIVE NERVOUS SYSTEM\*

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I have chosen to discuss the newer knowledge concerning the central vegetative nervous system for well considered reasons. It is not only a fact that the last decade has been accompanied by a great increase in our knowledge of the modes of activity of the peripheral vegetative fibers but the centers in the brain stem, the hypothalamus and even in the cortex have been studied to a considerable degree. At the same time a large amount of interest and research has been directed toward the study of those diseases of the viscera and glands innervated by the vegetative nervous system which have long been known to be psychogenic either in whole or in part. It has been known for many years that such organic diseases as peptic ulcer, bronchial asthma, essential hypertension and diabetes are influenced by emotional factors. The relation of the final organic disease

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process and the psychological disturbance has only lately become clearer. It is this field of correlation of the psychological with the organic that constitutes the outpost of internal medicine, a field but lately dignified by the name of psychosomatic medicine. Our interest in the central vegetative nervous system is based upon the fact that emotional disturbances, acting through these central structures, produce disturbances in function of the peripheral organs which, if long continued, only then result in serious, often irreversible organic disease. To the medical man the facts concerning the central vegetative system are of importance not only in understanding such psychosomatic disorders but also in comprehending the disturbances of the internal organs due to primary organic disease of the central vegetative nervous system.

Most of the peripheral visceral structures are innervated doubly by vegetative fibers. One set of fibers arises from the thoraco-lumbar outflow and constitutes the orthosympathetic system. The other, the parasympathetic system, arises from the vagus and pelvic vegetative outflow of fibers. This dual innervation is by no means as exactly mutually antagonistic as hitherto supposed. The source of the various portions of each outflow within the spinal and medullary gray matter have been considered as centers within the central nervous system for vegetative function. Obviously a nicely balanced coordination of visceral activity and a proper reciprocal innervation can only be accomplished through the function of certain supra-ordinated centers. Since the time of Claude Bernard and his medullary sugar puncture we have known of such centers in the medulla oblongata. However, it is only but lately that detailed knowledge concerning centers in the hypothalamus and in the cerebral cortex has been acquired and it is these centers that are of such great importance for our problem.

The hypothalamus is in reality a group of small nuclei which receive their afferent impulses from all the great sensory systems by way of the thalamus and perhaps from the cerebral cortex directly, but certainly indirectly. It sends fibers down the neuraxis to enter the lower autonomic centers and into the hypophysis by way of its stalk. As Cannon has pointed out, the hypothalamus regulates and integrates the nervous system which is concerned with maintenance of the body's internal milieu in what he terms homeostasis. More specifically it regulates endocrine functions chiefly through the hypophysis; it regulates and integrates the conserving autonomic functions; it effects defensive and protective reactions within the body which we know as emotional expressions and, finally, it influences the ac-

tivity of the cerebral cortex in regulation of its degree of excitation.

Its endocrine functions probably are all concerned with the hypophysis as the master gland of the endocrine system. Disturbances of this innervation associated with carniopharyngeal tumors or cysts, basal skull fractures, basal meningitis, vascular thromboses, encephalitis and chronic alcoholism result in disturbances in fat and carbohydrate metabolism, genital development and water metabolism. The syndromes of adiposity, emaciation, genital dystrophy and precocious puberty as well as diabetes insipidus are some of the clinical syndromes associated with disorders of the hypothalamus. Diabetes insipidus we know to be due to a disturbance of the hypothalamic hypophysial innervation. The other syndromes are probably not produced through the hypophysis itself but by a disturbance of one or more peripheral glands innervated by the vegetative nervous system.

The hypothalamus has attained the role of a superior central regulating organ subordinating brain stem, medullary, spinal and peripheral centers. Within it is a posterior orthosympathetic center and an anterior parasympathetic center, the former associated in its function with massive discharges of peripheral vegetative system, the latter exerting a conserving function on individual organs. Since the discovery of the hypothalamus as a visceral center, many functions have been attributed to it, such as rise in blood pressure, arteriolar contraction, dilation of the pupils, elevation of the hair, increase in blood sugar, dilation of the bronchioles, contraction of the bladder, uterus and gastro-intestinal tract, secretion of tears and saliva, regulation of body temperature and sleep regulation. These functions are, however, not in actual life separated so sharply from one another. For example, exposure to cold is associated with attempts at conservation of body heat and increased heat production. There results a peripheral vasoconstriction, rise in blood pressure, increased heart rate, increased respiration and increased oxidation of carbohydrates. All these and more can be imitated by stimulation of the posterior orthosympathetic portion of the hypothalamus. Increase in external heat results in measures to increase the loss of internal heat. The peripheral blood vessels dilate, sweat secretion is increased, the blood pressure falls and the heart slows. This is identical to what occurs from stimulation of the anterior parasympathetic hypothalamus. Ranson has shown very clearly that the hypothalamus acts as a double thermostatic apparatus. Diseases of the hypothalamus in man such as caused by tumors and encephalitis result in the same disturbance of temperature regulation as would be expected by putting out of con-



trol one of these thermostats. Lesions of the anterior hypothalamus result in hyperthermia and of the posterior hypothalamus, hypothermia. Epileptic attacks arise from irritation of the posterior hypothalamus in disease and tumors invading that structure. In this orthosympathetic epilepsy there is flushing of the skin, copious perspiration, salivation and tearing, the pupils enlarge and there is violent hiccupping and shivering. It is still questionable whether the more frequent so-called idiopathic epilepsy in man arises from hypothalamic irritation. Posterior hypothalamic stimulation causes marked and violent manifestations of rage. The same phenomenon may be produced by removing an inhibitory effect of the cortex from the posterior hypothalamus by a lesion in front of it. Just as stimulation of lesions of these centers causes a marked excitation and discharge in the peripheral structures innervated by the orthosympathetic system, so lesions of this area cause lethargy and sleepiness and often catatonic postures. The evidence is suggestive that the centers of the hypothalamus are concerned with keeping the body awake and the cortex active and that there is no real sleep center. However, it is inhibition of this excitatory center that probably effects the first step in sleep production.

There are many syndromes that arise from the hypothalamus but we may enumerate at least five main clinical syndromes: (1) hyperthermia, from anterior lesions; (2) diabetes insipidus and emaciation from anterior lesions; (3) adiposogenital dystrophy from lesions of the middle portion; (4) hypersomnia and hypothermia from lesions of the posterior portion and (5) epileptic discharges from the posterior portion. The great variety of complications of such symptoms are obvious and, in addition, isolated disorders of respiration and sweat secretion may be expected.

Recently there has been considerable work to show that centers within the cerebral cortex are also concerned with autonomic functions. Within the cortex, close to the corresponding somatic functions, there are areas which, when stimulated, evoke vegetative discharges which normally accompany the somatic functions of that area. For example, lacrimation is observed on stimulating the eye fields and salivation on stimulating the cortical fields which cause movements of the tongue. But, in addition, cardiovascular changes, gastro-intestinal disturbances and disturbances in sweat secretion may result from cortical stimulation. In irritative lesions of the cortex, changes in peripheral vegetative functions are often seen. Loss of such functions is observed in destructive lesions. The cortical level of vegetative representation is probably concerned with a shift of

blood or change in glandular activity which facilitates the cortical movement involved. There has been for some time evidence to show that the cortex inhibits excessive activity of the hypothalamus and it seems excessive activity of that structure is dependent upon a lesion which effects a release of the hypothalamus from cortical control. Tumors and chronic encephalitis, among other lesions, may be associated with rage attacks from uncontrolled action of the hypothalamus. The cortex damps down hypothalamic responses and permits its activity upon appropriate occasions.

The cerebral cortex in its monomotor functions and through its own autonomic centers produces changes in the peripheral structures effecting alterations in heart rate and blood pressure as well as gastro-intestinal activities. Irritating lesions of such autonomic centers may be responsible for certain so-called psychogenic abnormalities in activity of the peripheral viscera.

There is a good deal of evidence to show that the posterior hypothalamus is concerned with the degree of excitation of the cortex itself. Stimulation of the hypothalamus increases cortical activity and as it is concerned in such degrees of excitation it may be termed a center concerned in the degree of consciousness. Energy liberated in the hypothalamus is essential for the activation of the higher centers and, when the hypothalamic structures are destroyed, stupor, lethargy and even unconsciousness may result.

As a cephalic representative of the autonomic nervous system, the hypothalamus controls the activity of the periphery, balancing and regulating metabolism and homeostasis. It excites the cerebral cortex and in turn is inhibited by that structure from excessive activity.

Having seen how the superior vegetative centers in hypothalamus or cortex integrate and regulate the activity of the peripheral vegetative and glandular structures, we may see with greater clearness how disturbances of these central structures may imitate actual diseases of the viscera. Irritative lesions as well as destructive lesions of the hypothalamus may result in overfunction or decreased function in almost any part of the peripheral vegetative system and in the organs which it innervates. Hypertension, diabetes, tachycardia and disturbances in temperature regulation are but a few of the possible disorders that the internist sees which may be due to central lesions. We see such lesions resulting from a host of nonspecific causes. Probably of even greater importance are the psychological factors which, arising from internal emotional disturbances, produce through these central structures excitations which cause the manifestations of disease but which early

are unassociated with organic pathology. It is therefore obvious that to the internist it is important to know a good deal about the functions and the disorders of the central vegetative nervous system, in order to comprehend those internal disturbances which are not associated with local visceral pathology.

## RECOVERY FROM SUBACUTE INFECTIOUS ENDOCARDITIS

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In a recent number of the *Journal of the American Medical Association* we described a patient who recovered from subacute infectious endocarditis following prontosil therapy, but died later of cardiac failure. Recently we have seen another recovery from subacute infectious endocarditis, this patient, however, remaining well up to the present time. The first patient received only prontosil, the patient we describe in this report received both prontosil and sulfapyridine.

### HISTORY

W. G. Age, thirty-six, referred to us through the courtesy of Dr. G. F. Corrigan of Wichita, Kansas, entered the University of Kansas Hospital on March 10, 1939, complaining of fever and chilly sensations.

The family history is negative.

Personal history: The patient had rheumatic fever at the age of fourteen which left him with a mitral lesion. The personal history is otherwise negative. The present illness began approximately one month before admission, with gradually increasing fatigue and fever. He consulted his physician at that time, and was found to have a daily evening elevation of temperature varying from 100 to 102 degrees. A blood culture taken at this time showed a green producing streptococcus. The patient went to bed three weeks before admission to the University of Kansas Hospital, and during this period received 1350 grains of neoprontosil by mouth and 190 cc, prontosil intramuscularly. Four blood cultures were positive for *Streptococcus viridans*. The patient had several chills and an irregular fever, his temperature rising to 101 degrees and 105 degrees F., with pronounced sweating.

The patient, on admission, was perspiring freely. His heart was definitely enlarged, and a systolic and presystolic murmur were heard at the apex. The

spleen was palpable. Blood examination showed red blood cells to be 3,610,000; white cells, 14,000; hemoglobin, 66 per cent (10.1 gm.). Blood cultures taken on March 12, 1939, showed the presence of *Streptococcus viridans*. The patient was started this day on sulfapyridine, one gram every six hours. The temperature, which had varied from 99 degrees to 101.6 degrees F., fell to normal in twenty-four hours, and remained so for the rest of his stay in the hospital.

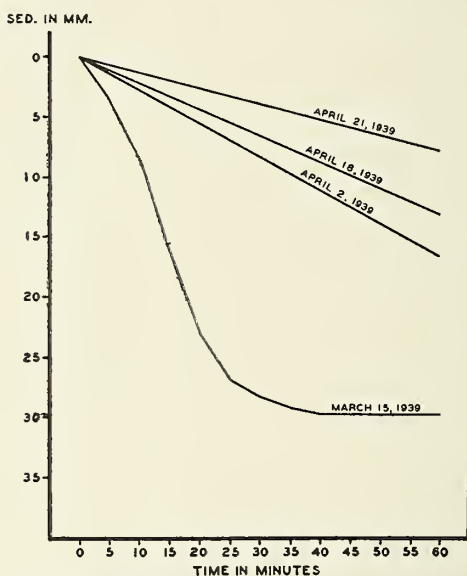


Fig. 1. Chart showing sedimentation time on various dates. 0-8 is normal.

Following the institution of sulfapyridine therapy, blood cultures, made regularly three times a week, were uniformly sterile. The blood content of sulfapyridine varied from 4 mg. to 4.95 mg. per 100 cc. The patient's blood count gradually rose, and on April 24, the red blood count was 4,520,000; the white count was 8,800; and the hemoglobin was 90 per cent (14 gm.). The patient received one blood transfusion on March 30. The sedimentation rate, on admission, showed a drop of 30 mm. in forty minutes. At the time of dismissal from the hospital, the sedimentation rate was quite normal. (Fig. 1). The sulfapyridine therapy was discontinued April 16. The patient, after showing a normal temperature for five weeks, and negative blood cultures for the same period of time was dismissed from the hospital on April 22. At this time the mitral murmurs persisted, but the spleen was not palpable. According to the information received three months after dismissal from the hospital, the patient remains well.

In summary, this patient seems to have been an undoubted case of subacute infectious endocarditis

\*Major, Ralph H., and Leger Lee H., Recovery from Subacute Infectious Endocarditis Following Prontosil Therapy. *J. A. M. A.* 1938, CXI 1919.



from which he recovered following prontosil and sulfapyridine therapy. In drawing conclusions, the same caution must be exercised which we mentioned in reporting the previous recovery. It must always be kept in mind that occasionally cases of subacute infectious endocarditis recover spontaneously. We feel, however, that in this instance, as in the previous one, there is excellent evidence that recovery was due to the therapy employed. Also, in this patient, as in the previous case, the relatively short duration of the illness probably played a decisive role.

## DERMATITIS VENENATA

### Practical Aspects and Innocuous Treatment

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Dermatitis venenata, or contact dermatitis, is any inflammation of the skin resulting from the action of various nonliving, animal, vegetable or mineral substances upon the surface of the skin.

The lesions vary considerably in character, and all degrees of inflammation are encountered, from simple hyperemia to actual gangrene and sloughing. Most lesions are at first erythematous and sharply limited to the surface touched by the irritant. Later the skin may become papular, vesicular or eczematous, and pustular if secondarily infected. Dermatitis may be limited strictly to the site of actual contact, it may spread beyond the borders of the contact zone, or widespread manifestations may appear scattered over the body, depending on the degree of reactivity of the skin to the noxious agent.

The eruption which ordinarily results from a single contact with the offending substance is self-limited. It disappears spontaneously without scarring in a few days or weeks. Repetitions of contact are commonly the case, however, and the response of the sensitive skin may become progressively more intense so that reaction spreads far beyond the site of contact. The clinical picture and the history the patient gives are intimately dependent upon the time intervals involved. Daily association with the deleterious agent evokes continuous and chronic disease, while occasional flares result from and denote corresponding occasional contacts. Thus, as Rackemann<sup>1</sup> pointed out, the investigation of etiology in a given case requires intelligent questioning of the patient, for periods of freedom from disease are as significant as periods of activity.

The lesions give rise to burning and itching sensations. The hands, forearms and the face are the sites of predilection, although no region is exempt.

The morphology of the lesions under such names as "erythematous eczema," "vesicular eczema," "chronic eczema," "fissured eczema," is not in itself sufficient to identify the disease or to satisfy the modern need for interpretation. Dermatitis always has a cause although it may be difficult to identify. Dermatitis due to a dye, paraphenylenediamine for example, at different times in one person might manifest a great assortment of clinical appearances, from bullous inflammation to lichenification. To name it "erythematous eczema" at one time and "lichen chronicus" or "neurodermatitis" at another would indicate failure to comprehend the phenomena manifested.

I include within the meaning of "dermatitis venenata" all inflammations of the skin provoked by contact, whether the agent is one which acts with substantially equal effect upon all skins (nitric acid, lye) or with widely variable intensity on different skins because of idiosyncrasies. Irritation provoked by medicines such as ammoniated mercury is dermatitis venenata of medicinal origin. Allergic dermatitis such as primrose dermatitis or nickel dermatitis is included. I clearly recognize that the etiologic emphasis in the one class should be placed upon chemical trauma and in the other class upon "allergic" reaction. There seems, however, to be no hard and fast line of distinction between the two extremes, for the experiments of Sulzberger and Baer<sup>2</sup> (1938), as well as many others, indicate that substances must exist which will provoke allergic, eczematous reactions in every individual. One must interpret the eczematous response as the physiologic response to some sensitizing irritants, just as purulent inflammation is expected as the physiologic response to *Staphylococcus aureus*. Sulzberger and Baer's studies, using related, simple chemicals of known composition (chloronitrobenzenes), showed that the ability of each chemical to produce contact eczema in human beings paralleled the ability to produce skin sensitization in guinea pigs, and that this property seemed to be related to the lability of the C1 and NO<sub>2</sub> groups. The hypothesis follows that some such contactants combine with body proteins to form allergenic complexes.

### DERMATITIS VENENATA AND "ECZEMA"

Sharp distinction is lacking between chemical traumatic dermatitis and allergic contact dermatitis except in number, frequency and intensity of contacts. Distinction is likewise lacking between dermatitis and the eczematous reaction to such products

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of parasites as reach the skin through growth on or within the skin or via the vascular system from distant foci, dermal or elsewhere. When one judges from the hands alone, one cannot differentiate between pompholyx due to sensitivity to chemicals of known composition and pompholyx caused by trichophytosis of the feet<sup>3</sup>. However, dermatitis venenata is contact dermatitis and it is not dermatomycosis or dermatophytid. I am of the opinion that, if one identified all cases of dermatitis venenata, dermatomycosis, dermatophytid, bacterial dermatitis, dermatitis dependent on focal infection (bacterids), dermatitis dependent on food allergy, and combinations of these, few cases of "eczema" would remain incompletely diagnosed.

The eyelids, which are tender tissue readily capable of becoming swollen and itchy, are almost invariably involved in contact dermatitis in which hypersensitivity is a factor. The flexural folds of the neck, and the delicate skin of the antecubital, popliteal and genital regions are commonly inflamed in widespread allergic dermatitis. These regions need not be sites of actual contact; in fact dermatitis caused by shoe dye, rubber garters or stationery may provoke inflammation of the eyelids which is more persuasive to the patient of the need for medical care than the inflammation at the site of contact. Repeated attacks of swelling and itching of the eyelids, with redness, infiltration and loss of flexibility, are usually due to dermatitis venenata. While eye drops containing atropine or dionine may be the cause in a given case of itching lids, one usually must seek noxae through the whole gamut of airborne, medicinally or cosmetically applied, occupational, seasonal or other contacts with any part of the entire body surface. Allergy to fungi may provoke exceedingly similar eczematous response. Mycotic eczema is recognized by discovery of the focus, the identification of the parasites there and the flare of the "-id" coincidentally with activation of the focus. The eczematous reaction is not different with different allergens.

The experienced practitioner identifies the allergic nature of the dermatitis at a glance. Identification of the cause, however, is often a complex and tedious business which involves separation of cases due to parasites, complicated by parasites, or dependent on foci of infection or on internal factors. Without such distinctions a case is better labelled "dermatitis of undetermined cause" rather than "eczema," a title which, if unqualified, suggests not only lack of knowledge but also lack of curiosity.

#### CAUSES OF DERMATITIS VENENATA

The problems of altered reactivity are gradually becoming clarified. It seems safe to make these

generalizations: (a) All human beings can develop hyperreactivity to some things under some circumstances; (b) the degree of reactivity in a given person varies greatly with the manner of contact and the quantities, durations and time intervals involved; (c) the clinical manifestations depend on the reactive tissue, whether dermal or epidermal, the degree of reactivity, the location, duration, intensity and frequency of contact, and the bacterial and medicinal complications that are superimposed.

Wise and Sulzberger<sup>4</sup> (1933) noted there is little known about the reason for sensitivity appearing; its onset may be sudden after years of preceding, innocuous contact. The farmer with ragweed dermatitis<sup>5</sup> is an adult who came in contact with the allergen for years without having symptoms of reaction. As Wise and Sulzberger remarked, fungi, by "setting sensitization mechanisms into motion," are common contributory causes. Burns, abrasions, moisture, heat, hyperhidrosis and diabetes likewise render the person more vulnerable.

Wise and Sulzberger<sup>4</sup> (1933) noted the spread of sensitization from the initial substances to other substances of related or nonrelated chemical nature. This phenomenon, observed but not explained, is surely of practical importance. White and Taub<sup>6</sup> (1932) pointed out the difficulties that arise from nonfungus sensitization following upon fungus infection and dermatophytid. While it is common for chemical sensitization to succeed dermatomycosis, a matter of especial significance in industrial dermatology, it is likewise common for nonparasitic contact dermatitis to become complicated with parasitism, as when dermatitis of the neck becomes involved with trichophytosis from the feet, or when dermatitis of the hands becomes involved with moniliid from inconspicuous vulvovaginitis, or when perianal and pedal epidermophytosis is intermingled with medicinal dermatitis venenata so that it is impossible to tell which came first. Such combinations constitute the confusing cases spoken of as "eczema." The possibility of unravelling these complexities (compare Sulzberger and Kerr's<sup>7</sup> interesting analysis of ten puzzling dermatoses) makes one anxious to dismiss "eczema" from the scientific vocabulary.

#### RECOGNITION OF DERMATITIS VENENATA

In acute cases (initial reactions), abrupt onset, history of exposures, location, erythematous and vesicular character of the eruption and the sharp or fading margins of it depending on the manner of contact, all serve to make the diagnosis of contact dermatitis easy; but to unearth the particular cause is less simple. The longer the dermatitis has en-



dured the more difficult it is, as a rule, to discover the allergen. The flares give clues; contact must have been made a few hours before the flare began. The involvement of the eyelids and flexures in cases of comparatively high degrees of sensitivity is typical of dermatitis venenata. It may require great determination to override an uninformed layman's desire to attribute obvious contact dermatitis to foods, acid, blood disease or nerves. Such determination is necessary if puzzles are to be solved, and a puzzle is exactly what each case of eczema is.

The location is the first clue to the nature of the noxious agent. The manner of reaching the skin obviously influences the location. Allergens of eczematous dermatitis may reach the skin as air-borne dust which settles in greater concentration on exposed parts and where the clothing constricts. Dermatitis produced by ragweed occurs in adults and rarely in children. Its features<sup>8</sup> are characteristic: the seasonal onset, the annual repetitions during July and August reaching a maximum in September, and the disappearance following the first frost; redness, swelling and itching of the eyelids and inflammation of the exposed surfaces, especially the hands, wrists, ankles and face; exacerbations that occur after hunting, weeding or otherwise contacting the plant, and the local reaction with distant flare when the patch test is applied.

The analysis of Niles<sup>9</sup> (1938) of two cases of dermatitis caused by shoes reveals the typical course of contact dermatitis and the correct diagnosis of it. Vesicular eruptions appeared on the feet when the offending shoes were worn and disappeared when they were not. Dermatomycosis was ruled out by the relationship to the wearing of the shoes, by the positive patch tests, by the absence of demonstrable fungi, by the severity of the itching which seemed disproportionate to the visible dermatitis (an important feature), by the freedom of the interspaces from involvement, by the predilection for the dorsum of the foot, and by the sharp margins of the irritated areas. Niles appropriately called attention to the fact that not all vesicular eruptions on the feet are ringworm; Mitchell<sup>10</sup>, incidentally, has long urged that not all pustular acrodermatitis is fungous in origin. But either bacterial or mycotic invasion of contact dermatitis may occur, and certain cases of contact dermatitis may be greatly benefited by the eradication of foci of infection. Contact dermatitis is almost never primarily pustular; secondary infection from the skin flora, contaminants or focal sources render it pustular when it is.

Eyelids are often irritated by an ingredient of a hair tonic, hair dye, wave lotion, face cream, eye wash, nasal spray, face powder, even spectacle rims,

Rattner<sup>11</sup> stated (1934). It was his belief that, "A good, intelligent history from a cooperative patient brought out by pointed questioning will help to solve more cases than will routine skin tests; the patch test is valuable, for the sensitization is usually epidermal." As Sulzberger and Rostenberg<sup>12</sup> (1935) said, "The patient's understanding and cooperation are of primary importance in the search; in the usual case it is imperative for the physician to give the considerable time necessary for the patient's enlightenment."

Osborne and Putnam<sup>13</sup> (1932) noted that ninety per cent of industrial dermatoses are allergic or mycotic. While full study of such cases is time consuming and requires skill as well as patience, the determination of the exact cause is worth the effort. The sensitization is likely to be localized in the fixed cells so that patch tests with actual allergens may be positive only at the site of the reaction.

Diagnosis is proved by (a) identification of the agent by positive patch test, (b) flare of the sites of the original dermatitis when the reaction to the patch test occurs, and (c) disappearance of the disease when the agent is completely avoided. The third criterion is the important one.

#### PRINCIPLES OF HEALING AND MANAGEMENT OF DERMATITIS VENENATA

Removal of the cause is usually followed within a few days or weeks by complete recovery. Repeated attacks are the rule until the cause is identified and contact is avoided. A known and carefully avoided agent may be met accidentally or inadvertently. Efforts to desensitize are in general less successful than avoidance. Sensitization may disappear if contact is avoided for many months, or the degree of sensitivity, at least, may diminish greatly. The duration of sensitivity to contacted agents was found by Gomes-Orbaneja and Barrientos<sup>20</sup> to have disappeared in two thirds of 106 patients who were retested from one to three years after their dermatitis had appeared and had been identified and who had been free from dermatitis during the interval. In some instances, sensitivity persists undiminished throughout life, and contact means inevitable disease.

The basic principle of treatment is to remove the cause. One must give the patient symptomatic relief while the skin heals. If the contact has occurred within a few hours but severe reaction has not as yet set in, then the removal of the irritant from the skin may be indicated. Soap and water at this time may be urgently needed and successful whereas a few hours later this same treatment would do great harm. Alcohol or other suitable solvent is used in exactly the same way. In ivy poisoning a great

amount of allergen may be present even after reaction has set in. This can be neutralized effectually by the application of 1:100 potassium permanganate solution which is swabbed on until the horny layer is stained deep brown. Chemical neutralization of many dermal irritants can be accomplished. The industrial physician must use his ingenuity and may profit from consultation with the professional chemist. Sodium thiosulphate counteracts iodine.<sup>14</sup>

Prevention of contact may be obtained in some circumstances by discarding objects such as shoes or furs. Often it is difficult to convince a patient that one, solitary, momentary contact is sufficient to undo the benefits of two weeks of hospital treatment. Sometimes mechanical means (gloves, vaseline, boots) or chemical means (baths, soaks, detoxifying agents) may be used to interrupt the contact; or the sufferer may learn what not to touch or where not to spread the contact; or a workman may be shifted to a different job so that he meets different things. Pether's<sup>15</sup> suggestion of applying talc to keep the skin dry, rather than grease which would simply cause particulate irritants to adhere the more, is a protective measure which I approve from my own trial in several cases. One patient, a farmer with cornshuck dermatitis, was enabled to work if he dusted himself thoroughly before entering the fields and bathed immediately after his work.

It may be impossible to move the individual from his occupation or to protect him or to desensitize him, as in some cases of ragweed dermatitis, and what to do for these people is surely difficult to decide. They could go on relief.

When the allergen is not known, the avoidance of every possible agent is desirable. Unless the patient is considerably distressed by his disease, he will not ordinarily be willing to be hospitalized, but hospitalization with complete control of the environment, separating the patient from his home, his clothing, his hair tonic and toothpaste, his garden, potted plants and sofa cushions, is often the most effective way to bring the irritation under control.

#### THERAPY ENABLES, NOT CAUSES, HEALING

Allergic dermatitis may persist for days or even weeks after the cause has been removed. I observed this in dermatitis in myself. It was caused by the leather strap of a wrist watch. Removing the cause and not interfering with the normal course of succeeding events, I found that no change took place in the clinical appearance of the reaction for a week; then, involution speedily occurred. It is during such a refractory period that a physician, impatient for benefit in a case of distressing dermatitis of unknown external cause, changes from one medi-

cine to another in the futile expectation of finding something that will bring about healing. As in the case of a wound, healing depends on the action of the tissues, not on the salve that is applied. In allergic dermatitis as well as in fracture of a leg, healing will take place through intrinsic agencies if further damage is avoided. The medical problem in eczematous dermatitis is one of taking and keeping something off the skin, not of putting something on. In shifting from one application to another, great risk is run of applying a medicine to which the patient is sensitive, and one does best by prescribing the simplest and blandest of agents and adhering to their use if one is certain they do no harm. I have found it useful, as also have Wise and Sulzberger<sup>16</sup>, and others, to do patch tests on a patient with the individual ingredients of proposed salves to make certain that they do not irritate. Many a case of exfoliative dermatitis has resulted from the application of ten per cent ammoniated mercury ointment to some minor, evanescent inflammation with the development of spreading mercurial dermatitis not recognized as such and treated with more mercury.

A site of allergic dermatitis, as Sulzberger<sup>17</sup> has noted, may subside and flare later without further contact with the allergen, presumably because of variations in degree of local reactivity to a depot of antigen, the flares occurring whenever a certain height of sensitivity is reached. Fatigue, worry and overindulgence in coffee are capable of lowering the threshold of the patient or of increasing his sensitivity for a time.

The x-ray possesses the ability to desensitize locally. This is probably brought about by the dissolution of cellular elements responsible for sessile antibodies. Reactivity generally returns within from three to six weeks after this nonspecific desensitization. If the same dermatitis is treated time after time with x-ray, the eventual result is an x-ray burn superimposed upon it. The proper use of roentgen treatment in contact dermatitis, and in eczematoid dermatitis of any origin, depends on the rational implications of this fact. The cure of such dermatitis must be accomplished by means of removing the cause, not by means of temporarily destroying the ability of the skin to respond to irritation. Of course, temporary relief by means of roentgen treatment wisely given is most welcome to the patient.

#### TREATMENT

In acute dermatitis of contact origin, I have found the simplest of medicines the most satisfactory. The skin may be freed of previously applied greases by means of benzene. Pure white vaseline is put on to protect denuded nerve endings, and soft, clean



towels, cool and wet with plain water or aluminum acetate 1 to 500 in water, are superimposed. This is comforting, and it is as nearly completely bland as I can devise. The patient is denied coffee and is given aspirin, five grains every three hours, unless intolerance occurs. I think bromides are too prone to intoxicate, for I have seen profound and prolonged mental disturbance from a few doses of seemingly reasonable quantities; and I think barbiturates depress the emotions without giving relief from itching. Aspirin does give relief, and intolerance to it, said to be more frequent in allergic disease<sup>18</sup> has been decidedly uncommon in my experience. What the weary, itching patient wants is respite from bedevilment by his skin; he ordinarily requires no other encouragement to sleep.

Any nonirritating moist compress is equally serviceable. Boric acid, thirty grains to the pint of water, weak potassium permanganate (1:5000), or mercuric chloride (10,000) may be used. If no allergen remains or secondary infection exists, vaseline and cool water are wholly adequate, as they are in the treatment of sunburn. Calamine lotion with one per cent phenol is useful if there is no oozing and the area is not hairy. On oozing dermatitis it simply cakes and cracks.

If secondary infection exists, one or two per cent gentian violet<sup>19</sup> in water may be applied daily, and bichloride (1:10,000) or permanganate (1:5000) packs or soaks are to be preferred. Mercury intolerance is common, and mercurial irritation will be seen if the concentration is allowed to increase by evaporation without renewing the packs.

Proprietary preparations are urgently contraindicated. To use them presupposes incomplete interpretation of the disease under treatment; for, if a doctor is presumably intent on preventing irritant contacts, and applies a medicine the ingredients of which he does not know and reaction to which on the part of his patient no one can predict, then he is not practicing scientific medicine.

#### SUMMARY

Dermatitis venenata is inflammation resulting from the action of nonliving substances on the skin. The reaction in the skin may be simply traumatic or it may be allergic. Some agents traumatize on first contact and provoke altered reactivity in subsequent contacts in probably all skins.

The morphologic appearance of eczematous dermatitis due to contact depends on

- (a) whether the dermis or epidermis bears the brunt of the deleterious action;
- (b) the degree of sensitivity; and
- (c) the frequency, duration, intensity and location of the contacts.

The eczematous reaction is the same whether the allergen is a simple chemical substance or a living parasite. "Eczema" is no diagnosis.

Diagnosis of the existence of dermatitis venenata is easy; recognition of the specific causative agent is sometimes very difficult.

Many industrial, medical and medicolegal problems are dermatologic, and their solution requires competent understanding of allergic and eczematous dermatitis.

Itching dermatitis of the eyelids and flexures is almost invariably of contact origin. Skin tests with foods in such cases are barking up the wrong tree.

It is absurd to prescribe a remedy of unknown composition for the treatment of contact dermatitis of unknown origin.

The best remedial agents are those which allay discomfort with least irritation. Vaseline and cool moist compresses do this satisfactorily.

How to cure dermatitis venenata is a problem of keeping something off the skin, not of putting something on it.

#### BIBLIOGRAPHY

1. Rackemann, F. M.: History Taking in Allergic Disease, *J. A. M. A.* 106:976, 1936.
2. Sulzberger, M. B., and Baer, R. L.: Sensitization to Simple Chemicals, *J. Investigative Dermat.* 1:45, 1938.
3. Williams, C. M.: Trichophytid of the Hands, *Arch. Dermat. & Syph.* 27:973, 1933.
4. Wise, F., and Sulzberger, M. B.: Industrial Dermatoses, *Amer. Med.* 28:4, 1933.
5. Sutton, R. L., Sr.: Ragweed Dermatitis, *J. A. M. A.* 73:1433, 1919.
6. White, C., and Taub, S. J.: Sensitization Dermatoses of Non-Fungous Nature Following Superficial Fungous Infection ("Ringworm") of Extremities, *J. A. M. A.* 98:524, 1932.
7. Sulzberger, M. B., and Kerr, P.: Sensitization of Eczematous Type: 10 Selected Cases Illustrating Some Uses of Patch Tests, *J. Allergy* 4:326, 1935.
8. Brunsting, L. A., and Williams, D. H.: Ragweed (Contact) Dermatitis, Observations of 48 Cases; Report of Unsuccessful Attempts at Desensitization by Injections of Specific Oil, *J. A. M. A.* 106:1533, 1936.
9. Niles, H. D.: Dermatitis Due to Shoe Leather, *J. A. M. A.* 110:363, 1938.
10. Mitchell, J. H.: Streptococcal Infection Simulating Ringworm of the Hands and Feet, *J. A. M. A.* 104:1220, 1935.
11. Rattner, H.: Dermatitis of the Eyelids, *J. A. M. A.* 103:180, 1934.
12. Sulzberger, M. B., and Rostenberg, A., Jr.: Practical Procedures in the Investigation of Certain Allergic Dermatoses, *J. Allergy* 6:448, 1935.
13. Osborne, E. D., and Putnam, E. D.: Industrial Dermatoses with Special Reference to Allergy and Mycotic Dermatitis, *J. A. M. A.* 99:972, 1932.
14. Sutton, R. L., Jr.: Treatment of Iodine Burns with Sodium Thiosulphate Solution, *Arch. Dermat. & Syph.* 33:1062, 1936.
15. Pether, G. C.: Protection of the Skin Against Lime, *Brit. M. J.* 2:702, 1937.
16. Sulzberger, M. B., and Wise, F.: The Contact or Patch Test in Dermatology, Its Uses, Advantages and Limitations, *Arch. Dermat. & Syph.* 23:319, 1931.
17. Sulzberger, M. B.: Allergy in Dermatology, Review, *J. Allergy* 7:385, 1936; Editorial: *J. A. M. A.* 106:46, 1936.
18. Prickman, L. E., and Buchstein, H. F.: Hypersensitivity to Aspirin, *J. A. M. A.* 108:445, 1937.
19. Sutton, R. L., Jr.: Gentian Violet as a Therapeutic Agent, *J. A. M. A.* 110:1733-1738 (May 21) 1938.
20. Gomez-Orbaneja, J., and Barrientos, E.: Schweiz. Med. Wchnschr. 68 (June 11) 1938; Abstract in Key to Current Medical Literature, *Brit. M. J.* 2:58 (Aug. 20) 1938.

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In tuberculosis, care and personal discipline without climate are better than climate without care.—Wm. Osler.

## TREATMENT OF ACTINOMYCOSIS WITH SULFANILAMIDE—REPORT OF TWO CASES

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The treatment of actinomycosis with the iodides has been unsatisfactory; even when combined with x-rays the outcome has been in doubt and when recovery ensued it was slow. The pain and difficulty in opening the jaw when the disease was located in the face or neck persisted over long periods.

Following the appearance of the report of the successful use of sulfanilamide by Dr. Oliver Walker of Liverpool in the *Lancet* of May 28, 1938 we have used the drug in two cases—reported briefly below.

D. R. M.—age 34 years.

On September 12, 1938 he noticed that his jaw was sore and that he was having difficulty in opening his mouth. The back lower molar was suspected of causing it and he had it extracted.

He was first seen on October 14, when x-rays showed there was no bone involvement. On October 20, actinomycosis was suspected and he was put on potassium iodide grs. XXX with daily increasing doses.

On October 24, the lesions had extended and pus with the characteristic sulphur granules and ray fungus formation was obtained.

X-ray treatments by Dr. Tice of the Bell Memorial Hospital were given, three in all.

On November 24 in spite of daily dose of 120 grains of potassium iodide he was definitely worse. The swelling had extended both upwards and downwards. There was no secondary infection. On December 9, 1938 sulfanilamide grs. XXV t.i.d. was started. This dosage was given for three days when it was reduced to twenty grains t.i.d. for two days more. The relief from pain was almost immediate and the swelling promptly subsided and he was able to open his jaws wide enough to take food comfortably.

On December 19, 1938 sulfanilamide was repeated for another five days. The first two days he took one hundred and twenty grains and then sixty grains a day for three days longer.

March 1, 1939. He has remained well. The swelling has disappeared and the discoloration reduced to a small area about three-quarters of an inch wide and an inch and a half long.

H. G.

Patient was seen on February 9, 1939. He complained of a lump under his right mandible and swelling of face. The lump was first noticed while

shaving two weeks before. It grew larger and more painful rapidly. He stated he had been caring for a calf with "lump jaw" for some time previous to the discovery of his own lesion.

An examination showed an elevated spongy mass about the size of a half dollar with many small openings. The discharge was yellowish gray material with the characteristic sulphur granules. The swelling extended down as far as the collar bone and up over his jaw and cheek to his right eye.

A diagnosis of actinomycosis was made from the history of contact and examination of the pus.

The patient was given sixty grains of sulfanilamide in six ten grain doses daily for four days. An examination February 13, revealed the patient's condition much better. Swelling of the face and neck had subsided, lesion was much smaller and the discharge scanty. The dosage of sulfanilamide was reduced to forty grains daily for one week, at which time the lesion was reduced to the size of a dime and healed over. Sulfanilamide was continued for ten days at ten grains three times a day. An examination three weeks after the treatment was started revealed a well healed area about the size of a split navy bean.

## COARCTATION OF THE AORTA—CASE REPORT

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and

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In 1936 Baker and Sheldon<sup>1</sup> reported that coarctation of the aorta was diagnosed clinically in less than twenty-five per cent of the cases studied. In our case the diagnosis was not made clinically even though the physical findings were typical. We are reporting this case to emphasize the fact that this disease entity can be diagnosed clinically if sufficient attention is given to the physical findings. By determining the blood pressure in the lower extremities and by auscultating and palpating in the intercostal interspaces for a systolic bruit and thrill respectively the diagnosis can usually be made in those cases in which an adequate collateral intercostal circulation has developed. In the differential diagnosis of hypertension in a young adult, coarctation of the aorta should be considered.

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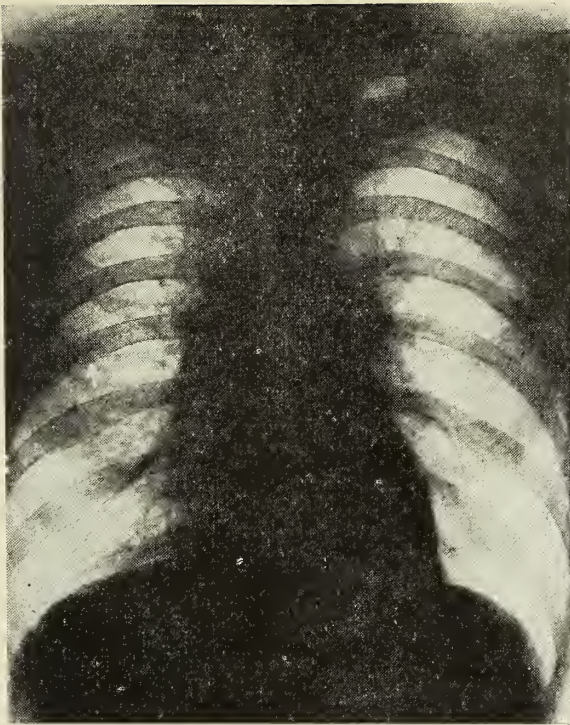


Figure 1. Roentgenogram of the chest. Note marked defects of the ribs.

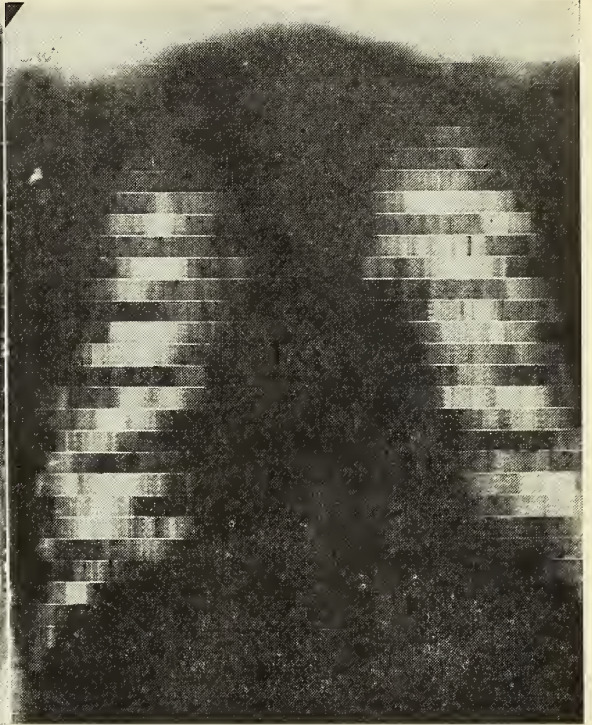


Figure 3. Kymograph shows forceful pulsation over the ventricular area.

This report is largely limited to a discussion of our case since the etiology, symptomatology, pathology and diagnosis have been very adequately reviewed by such writers as Abbot<sup>2</sup> and Blackford<sup>3</sup>.

#### CASE REPORT

J. S., a twenty-three year old white male, was first seen at the College Dispensary on March 1, 1938. At the time, he complained of a sore throat which was thought to be secondary to a chronic sinusitis. Symptomatic treatment was instituted. The next day he complained of general malaise and slight cough. On March 3 he was admitted to the College Hospital because the cough had become more severe. He was expectorating a greyish tenacious sputum and had pain in the right lateral part of the chest on breathing.

The history obtained revealed that the patient had had influenza, chronic sinusitis for ten years, and a tonsillectomy in 1936. There was no history of rheumatic fever, chorea, or scarlet fever. He had had frequent attacks of tonsillitis prior to his tonsillectomy in 1925, but very little sore throat since then.

There was a strong family history of cardio-vascular disease. The father died of "leakage of the heart," and the mother died of hypertension. A maternal aunt is living and has hypertension.

A review of the systems was essentially negative, except that the patient complained of vague precordial pain and tinnitus of several years duration.

In general the patient stated that he had enjoyed relatively good health all of his life. At ten years of age he consulted his doctor because of frequent attacks of tonsillitis. He was told that he had "heart trouble" though there were no symptoms referable to the cardio-vascular system. A blood pressure determination was not made at the time.

It was in 1930 that the patient's father died of "leakage of the heart". The patient, believing that his heart might likewise be affected, consulted his family doctor. Examination of the heart and a blood pressure determination were normal at the time.

During the course of an examination for life insurance in 1933, the patient's systolic blood pressure was found to be 180 millimeters of mercury. This was the first time that the patient became aware of the fact that he had an elevated blood pressure. The blood pressure has been checked quite frequently since then, and it has remained persistently elevated.

Physical examination at the time of admission revealed the following pertinent findings: temperature 99.6, pulse eighty-two, early tortuosity of the retinal arteries, injected pharynx, a few coarse rales heard opposite the sixth dorsal spine on the right,



and blood pressure 166/106 millimeters of mercury. Examination of the heart was negative as were the blood Wassermann and urine. The diagnoses at the time were: (1) acute upper respiratory infection; (2) essential hypertension. After a five day hospital stay, the patient was discharged as improved.



Figure 2. Close-up view of a rib showing marked erosion.

A six foot plate of the heart was taken on March tenth, primarily to determine the possible effect of the patient's elevated blood pressure on the size of the heart. The plate, was read by one of us (G. M. T.). The following is a detailed report.

"The heart is not enlarged. The aorta shadow is small; there is no knob visualized. There is erosion of all of the ribs, posteriorly, from the third to the seventh inclusive on the inferior margin. This erosion consists of bone defects varying from solitary notches to a diffuse serration over a two inch area. In addition the under surface of all of the ribs shows a sclerotic line. No lung pathology is seen. Conclusion: We feel we can make a positive diagnosis of coarctation of the aorta from this examination. The rib defects described are evidence of collateral circulation secondary to the stenosis of the aorta."

A kymograph taken on April 18, 1938, revealed a forceful pulsation over the ventricular area.

The patient was then recalled, and on re-examination the heart was found to be normal. On palpation in the intercostal spaces posteriorly definite pulsa-

tions could be felt, and on auscultation over these areas a systolic bruit could be heard. The following blood pressure determinations were made:

Left arm 180/110 mm. of mercury.

Right arm 162/104 mm. of mercury.

Left dorsalis pedis 138/? mm. of mercury. Right dorsalis pedis 138/? mm. of mercury.

### CONCLUSIONS

A case of coarctation of the aorta is presented with typical physical and x-ray findings.

1. Baker and Sheldon—*American Journal of the Medical Sciences*, May 1936, No. 5, Vol. 191, p. 626.

2. Blackford—*Archives of Internal Medicine*, May 1938, Vol. 41, p. 702-35.

3. Abbott—*American Heart Journal*, June 1928, Vol. 3, p. 381, 574.

## A COUNTY-WIDE HIGH SCHOOL TUBERCULIN TESTING PLAN

R. R. Melton, M. D.

Marion, Kansas

W. M. Tate, M. D.

Peabody, Kansas

In April 1939, the Marion County Medical Society cooperated with the Marion County Tuberculosis Association in an "Early Diagnosis Campaign" in an effort to find early tuberculosis in the county.

In years past both organizations have sponsored clinics together, however, the attendance at these clinics was small, rarely over 100 patients presenting themselves for examination.

The members of the medical society thought they could carry the tuberculosis campaign to the patients with better results than having the patients come to the clinic, and the plan devised was to offer the tuberculin test to all high school students in the county. It was with this in mind that we contacted the tuberculosis association and received their cooperation in the plan. Our next step was to contact the various high school superintendents, which was done by letter, and a stamped envelope enclosed for reply. We have thirteen high schools in the county. Our response from the superintendents was unanimously in favor of the test. After we had the cooperation of the tuberculosis association and the superintendents of the schools, we ascertained the enrollment in each school and contacted the State Board of Health for bulletins describing the tuberculin test, printed cards for the parents to request the test for their children and the necessary tuberculin to do the tests. The State Tuberculosis Associ-



ation furnished posters and booklets.

At the time we received the materials from the State Board of Health and from the tuberculosis association the superintendents of schools were contacted again and a time was allotted for one or two of the physicians in their respective towns to appear before the student body and give a short discussion of tuberculosis, show a few radiographs of pulmonary tuberculosis, describe the tuberculin test and announce the date when the tests would be made.

It was emphasized that the students could have their choice of the local medical profession to perform the test, that the test was not compulsory, that it positively would not be done unless the student presented his card and the request signed by his parent or guardian, that the test was free to all who desired it and that it was harmless.

The bulletin "The Tuberculin Test" as furnished by the State Board of Health was given to each student with the request card. A booklet entitled "A Stitch in Time" supplied by the State Tuberculosis Association was also given each student. The posters supplied were posted in the windows of the business houses, lobbies of post offices and schools.

It was in this way that we carried the campaign to the high school students, their parents and their teachers. It was not possible to have the tests done all over the county the same day and we asked the physicians in each town to make their own local arrangements. In towns that had only one physician a member of the committee appointed for this work assisted him in doing the tests. All of the medical profession assisted by contributing their time. Each of the seven newspapers of the county was supplied with news items relative to the value of the tests and the dates the tests were to be done, and after the tests were completed a summary of the findings was also furnished them for publication.

A total of 1205 tuberculin tests were done. Of these sixty-four showed a positive reaction. Of the sixty-four showing a positive reaction thirty-four were examined by a radiograph of the chest. Of the thirty-four examined radiographically seven active cases of childhood tuberculosis, two cases of minimal adult tuberculosis, and two cases of far advanced adult tuberculosis were found. In other words eleven patients or 32.5 per cent of the positive reactors that were x-rayed showed active tuberculosis, or roughly one per cent of the total number tested.

The Mantoux test was the principal test employed. We used Tuberculin, Purified Protein Derivative, P.D. & Co. The dosage employed was .0005 mg. Tuberculin. If the first strength tests are used the

individual receives .00002 mg. Tuberculin. If the second strength tests are used the dose is then .005 mg. Tuberculin. It was advised by the State Board of Health that we use the intermediate test of .0005 mg. Tuberculin which may be prepared from the second strength tablets by dissolving one tablet in 10 cc of diluent instead of following the directions in the package which calls for the dissolving of 10 second strength tablets in 10 cc. diluent. We had no difficulty reading the positive reactors and did not get sore arms. A few tests were made with Wolf's Tuberculin Ointment. All tests and readings were done in the schools. After the testing was completed an explanation was made to those showing positive reactions advising them that the next step in their diagnosis would be x-ray examination. The tuberculosis association retained some money from the sale of Christmas Seals that was made available to pay a small amount for the x-ray examination of those who could not otherwise make arrangements for this service. No one needing x-ray service and seeking it was refused.

After it was apparent that all who intended to cooperate by having x-rays had done so, the members of the medical society were asked to bring in the cards that had been returned asking for the test and to summarize them as to number tested and number showing positive reactions and to also bring the x-rays of those positive reactors for the next regular meeting of the society. At this meeting the films were viewed and discussed and a summary of the results was made.

The advantages of a program of this type are: More tests are given, more educational literature is distributed, and more people are interested than by a clinic.

It furnishes an activity of organized medicine in which all the members can participate and it thus stimulates interest within the profession.

It creates good will and stimulates public interest.

Summary: Details for a county wide high school tuberculin testing program as given.

Results of Marion County's program:

1205 tests performed.

64 positive reactors found.

34 x-rays taken.

11 active cases of tuberculosis found.

Incidence of tuberculosis roughly one percent of total number tested. Full cooperation of the State Board of Health and County and State Tuberculosis Associations was received.

## PRESIDENTS PAGE

To the Members of the Kansas Medical Society:

I have been much pleased with the interest shown by our various committees. We have already held meetings of two of the important committees, namely, the heart committee and the cancer committee. I was able to attend the meeting of the cancer committee but unable to attend the meeting of the heart committee. I am informed, however that the heart committee meeting at Emporia on July 30 was a very enthusiastic one and that they have begun work on a program that should be both interesting and instructive. The cancer committee held a meeting earlier in the month at Topeka. They likewise have started with their educational program, a program meant to benefit both the public and the profession. The minutes of both of these meetings are published in this issue of the Journal and will be interesting reading for all.

Early in September we will have a meeting of the committee chairmen. By that time we will have had meetings of at least three of the committees and they will be able to report their contemplated activities. These reports, I am sure, will be stimulating to all and will serve as models for each of the remaining committees.

In addition to the above, the Wichita program committees have already gotten a nice start on the program for the next annual meeting. It looks, indeed, as though this years work, particularly along educational lines, is bound to be a banner year.

In closing may I express the hope that when the date for the Committee Chairman's meeting is announced that each will make an effort to attend this meeting. If so, the meeting will be valuable and should serve as an inspiration for the beginning of a most excellent years program.

Yours very truly,

C. C. Nesselrode, M. D.



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## EDITORIAL

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### WILLIAM J. MAYO

The accomplishments of the elder Mayo are known to every physician in the United States. He became a world renowned surgeon, with his brother Charles, he founded and developed a great medical center and endowed a foundation for medical education and research. Dr. Will was an outstanding executive who would have made his mark in any enterprise which he might have undertaken.

His greatest contribution to medicine in its social, economic and scientific aspects has been the conception and refining of the idea of group approach to diagnosis and treatment. His personality will be long remembered and his influence will reach generations yet unborn. Another physician has been enrolled among the immortals.

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### SHOULD VINCENT'S INFECTION BE REPORTED? EIGHT DEATHS IN KANSAS DURING THE YEAR 1938

Vincent's infection has long been treated as a stepchild by the medical and dental professions. Neither group has given it credit for being the stealthy death dealer that recent morbidity and mortality reports reveal. We continue to give general anaesthetics to persons with mouths loaded with Vincent's and other organisms. We wear masks and do everything humanly possible to prevent infection in the operative field but the patient dies of pneumonia. Little or no consideration has been given to the asepsis of the mouth, nose and throat, through which the anaesthetic must pass. Some persons go so far as to say, "why should a disease so common as Vincent's infection be reported?"

In reviewing the morbidity and mortality report for the year 1938, in the state of Kansas, the number of deaths due to Vincent's infection argues more strongly than anything we can say, relative to the seriousness of this disease and the advisability of making it reportable in all states.

During the year 1938, 156 cases of Vincent's infection were reported. The number of deaths reported from this disease during the same period was eight. Of the thirty-three on which complete reports were listed, Vincent's ranked sixteenth in importance as the cause of death. During the year 1937, ninety cases were reported and six deaths were charged to this disease.

Vincent's infection was the cause of more deaths than chickenpox, amoebic dysentery, erysipelas, German measles, malaria, epidemic cerebro-spinal meningitis, mumps, ophthalmia neonatorum, pellagra, poliomyelitis, scabies, smallpox, trachoma, tularaemia, undulant fever, rabies (in man) and "other diseases reported" in the state of Kansas.

More than 2,000 school children in the state, were examined by the division of dental hygiene, using clinical plus microscopic findings, to determine the incidence of Vincent's infection in the schools. The survey disclosed the following data: Cross section of a first-class city in Kansas—children in grades seven and eight—8.6 per cent presented diseased gum conditions plus strong positive microscopic findings; negro children—fifteen per cent, and indigent children—fourteen per cent. Some Vincent organisms may be found in practically all adult mouths. Approximately fifty per cent will present strong microscopic plus clinical findings.

The number of cases reported, the number of fatalities, and the high incidence of this disease, as determined by various surveys, demonstrates that Vincent's infection is a public health problem.

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### ALKALOSIS IN PEPTIC ULCER

Sippy observed toxic symptoms associated with the use of large doses of alkaline powders but Hardt and Rivers<sup>1</sup> described in detail alkaline intoxication and applied the name "alkalosis". The deleterious effect of prolonged administration of alkalis on renal function and the fact that alkalis are poorly tolerated by patients with renal disease, has been recognized by many workers.

Eisele<sup>2</sup> presents biochemical and clinical studies on patients receiving alkali therapy for peptic ulcer, and an analysis of the clinical records of twenty-

eight patients in whom alkalosis developed during treatment for peptic ulcer.

He defines the term "acid-base balance" as the equilibrium between the anions and cations of the body as reflected by their balance in the blood. Many kinds of ions are involved but the determination of the pH and the carbon dioxide content are adequate. The latter consists of the serum bicarbonate and the carbonic acid. The serum bicarbonate or "alkali reserve" is the most informative single value. These three values are essential for there are serious disturbances in the acid base balance in which the P H or the carbon dioxide content may remain normal. Because of the reciprocal relationship between the serum chlorides and carbon dioxide content of the blood, determination of the former in alkalosis is not essential, it merely reflects the change in the latter and loss of chlorides are probably not responsible for the symptoms. This effect is a compensatory shift to maintain a relatively constant total base (largely  $\text{Cl}$  and  $\text{HCO}_3$ ) to preserve a normal blood electrolyte tension.

In all patients receiving Sippy therapy some degree of chemical alkalosis developed, with maximum alkaline shift usually on the third day. Subsequent alkali tolerance developed in most patients and clinical alkalosis in a few. This tolerance depends upon the ability of the kidney to excrete the excess bicarbonate and basic ions.

The symptoms of clinical alkalosis were distaste for the powders, milk and cream, lassitude, weakness, headache, nausea, vomiting, drowsiness to stupor and coma, and mild to severe mental symptoms which are seen especially in older patients with evidence of arteriosclerosis. Tetany and muscular twitchings usually occur in the hyperventilation type of alkalosis. There was a striking lack of correlation between the severity of symptoms and the degree of chemical alkalosis.

Of the twenty-eight patients in whom clinical alkalosis developed, nineteen showed evidence of preexisting renal damage. During alkali therapy, the urinary excretion of solids is nearly doubled. The situation is compared with that of a heart with low functional reserve, tolerating ordinary activities of life, but, which fails when additional work, as in pregnancy, is placed on it.

Eisele suggests that special tests of renal function be made if prolonged alkaline therapy is to be given, especially in older patients, if there is evidence of anemia, hypertension, arteriosclerosis, prostatism, or previous hemorrhage. The concentration test is preferred because it registers the function of the kidneys while they are under functional strain.

D.C.W.

1. Hardt, L. J., and Rivers, A. B.: Toxic Manifestations Following the Alkaline Treatment of Peptic Ulcer, *Arch. Int. Med.* 31:171 (Feb.) 1923.

2. Eisele, C. Wesley: Changes in The Acid-Base Balance During Alkali Treatment For Peptic Ulcer (A clinical analysis in twenty-eight patients), *Arch. Int. Med.* 63:1048 (June) 1939.

## EVEN AS A RITUAL

Under "Current Comment", in a recent issue of the *Journal of the A. M. A.* there is to be found a reference to the "diary" of Mr. H. W. Ogilvie, published in the *Guy's Hospital Gazette*. Mr. Ogilvie is a surgeon of Guy's Hospital, London. His comments on surgery over here indicate that he has "looked in" on some surgical operations in certain hospitals and has cast his monocled eye upon the instruments in use with some astonishment. He seems to have been impressed by the courage and independence, the self sufficiency and the quick decisions of the surgeons he saw at work. He considers the surgical instruments so much alike that they appear to him to be quite "lacking in individuality". If Mr. British Surgeon had visited an American surgical congress and viewed the instruments displayed, his heart might have been gladdened because of the great number of gadget-instruments promulgated by enterprising instrument dealers. In the surgical clinics visited he did not see them, be it said, to the credit of surgeons he saw at work.

Mr. Ogilvie refers to the "Halstead tradition" in which "the technic of 1910" is carried out as a "religious exercise". He criticises the sharp dissection of the axilla as being painful to watch because of the length of time it takes. He saw more trauma and more bleeding and less clear planes, contrasting the method was that of dull dissection. He objects to surgeons adhering in spirit and in truth to an established technic in an institution where over a long period of years definite surgical values have



been sought and established. Other institutions use other methods with the same exactitude and it is only through the study of various methods with their results that conclusions can be drawn.

It is hard for the casual observer from abroad to take American medicine seriously. For many years the supremacy in medical science and its clinical application, remained abroad. America developed men like Halstead who became active and masterful in a period of great medical advancement. The work of such men is carried on by their pupils. When clinical research demonstrates more effective methods, they are adopted, but when a method or technic is proved efficient the wise surgeon keeps on using it, even as a ritual.

R.B.S.

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## CANCER CONTROL

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### MINUTES

The following minutes of a meeting of the Committee on Control of Cancer, held in Topeka on July 6, described in detail an extensive lay educational program recently approved as a joint enterprise for 1939-40 by the Kansas Federation of Womens Clubs, the Womens Field Army and the Society Committee.

Since the success of the program will depend mainly upon the interest and assistance provided by the county medical societies, the committee will greatly appreciate every member reading the following information carefully.

\* \* \* \*

The members present were Dr. Howard E. Snyder, Chairman, Dr. Marion Trueheart, Dr. James Hibbard, Dr. M. B. Miller, and Dr. C. C. Nesselrode. Clarence G. Munns was present as Executive Secretary.

Dr. Snyder presented a report concerning a recent meeting representatives of the committee held with the Executive Committee of the Kansas Women's Field Army and with Mrs. R. H. Turner, President of The State Federation of Women's Clubs. It was reported that it was the recommendation of that group that an extensive lay educational program on cancer be held during 1939-40,

this lay educational program to be sponsored by The Kansas Federation of Women's Clubs, the Kansas Women's Field Army, and the Kansas Medical Society. Following a discussion of possibilities in this connection the committee unanimously approved a program of this kind. Decision was made that the following procedure be recommended:

1. That one topic pertaining to malignant disease should be featured in 1939-40; and that other topics should be featured in similar programs held in succeeding years.

2. That the topic to be featured in 1939-40 would be skin malignancies.

3. That an effort be made to present programs in every town in Kansas in which there is a unit of the Federation of Women's Clubs, and that the program in each community be sponsored by the local unit of the Federation of Women's Clubs, the local unit of the Women's Field Army, and the local county medical society.

4. That it be suggested that two programs be presented each time, the first program to be presented to high school students at the high school convocation in the morning and that a second program, open to the general public, be presented in either the afternoon or evening of the same day.

5. That each program should consist of two talks the first of which should deal with the general cancer problem and the second a talk dealing with skin cancer.

6. The speakers for the meeting shall be selected by the county medical societies in the county in which the program is to be presented. If any county medical society does not desire to use two of its own men, the cancer committee of the state Society will be glad to furnish the speakers.

7. That suggested talks shall be provided by the committee on the two subjects to be presented. Dr. Snyder was asked to prepare the talk on the general problem of cancer and Dr. Trueheart and Dr. Van Cleve were asked to prepare a talk on skin malignancies. It was the thought of the committee that furnishing prepared talks to each county medical society would not only serve to prevent a great deal of duplication of effort but it would also serve to somewhat standardize the talks given throughout the state.

8. That both of the above talks be printed in the Journal and reprinted for distribution to county medical societies.

9. That on receipt of a bulletin describing the program in detail each secretary of each county medical society and each official representative be asked to interview representatives of the local Feder-

ation of Women's Clubs and the Women's Field Army to offer the assistance of that county medical society in the handling of the program.

10. That the above bulletin also contain a description of the organization work of the Kansas Women's Field Army; the need for county medical society assistance in the handling of the problem of lay education in cancer; and a description of the cancer brochure which will be issued by this committee in the near future.

11. The following schedule of releases for the program were adopted:

a. That the minutes of this meeting be published in the August Journal.

b. That a copy of the bulletin describing the above program and copies of the two suggested papers be published in the September Journal.

c. That a scientific paper on skin malignancies be published in the October Journal.

d. That recommendation be made to the Editorial Board of the Journal that any editorial assistance possible be devoted to this program.

The next item of business was a discussion of the brochure or booklet on cancer completed by last year's committee. Dr. Nesselrode reported that it was his feeling that all of the scientific articles on cancer had been published in the Journal in the past year, and that we were now ready to assemble these articles and have them published in book form. The central office was asked to handle the following arrangements in that connection.

1. Obtain galley proof of the articles which are to be included in the brochure.

2. Forward these proofs to Dr. Snyder for editing and arranging.

3. Have prepared a printer's dummy and make final arrangements for printing with the Kansas State Board of Health.

Decision was made that a recommendation should be given to the Kansas State Board of Health that another state-wide post graduate program on cancer should be held during 1939-40. Dr. Snyder was asked to write the Kansas State Board of Health in this regard and to suggest that this year's program necessitates two speakers for a series of six meetings.

Discussion then centered around the subject of the cancer section in the Journal. It was the consensus of opinion in the committee that the section should be continued and Dr. Snyder was asked to write the Editorial Board to determine whether the following schedule of articles would meet with its approval:

September issue—bulletin and talks in connection with the 1939-40 lay educational program.

October issue—scientific paper on skin malignancy.

December issue—paper on cancer quackery.

January issue—paper describing the activities and plans of the national cancer program.

February issue—a paper describing the progress made in Kansas on cancer during recent years. (The central office was asked to make a survey of each county medical society of the facilities and equipment available for the treatment of cancer in each county.)

March issue—an article describing the work of the Kansas Women's Field Army and its annual membership campaign.

The committee also was of the opinion that Dr. Helwig of Wichita should be asked to serve as editor of the Cancer section of the Journal.

The committee was of the opinion that a rather extensive section of scientific exhibits on cancer should be prepared for the next annual session of the Society. Dr. Miller was asked to prepare plans in this connection. Dr. Miller was also asked to investigate possibilities for financing the construction of a suitable traveling exhibit for the Women's Field Army.

Dr. Hibbard was asked to investigate through the program committee of the Sedgwick County Medical Society the possibility of presenting a guest speaker on cancer at the next annual session.

It was the belief of the committee that extensive files should be maintained in the central office consisting of slides for cancer lectures, pictures and charts for use in cancer exhibits, and a collection of talks for presentation before both lay and professional audiences. Dr. Trueheart was asked to supervise arrangements in this regard.

The central office was also asked to make arrangements with the Kansas State Board of Health wherein reports of cancer morbidity and mortality in Kansas will be furnished to the committee each six months.

The central office was also asked to prepare and execute a survey of existing and needed cancer therapy equipment in the state. Dr. Trueheart was asked to supervise this project.

It has been further suggested that the bulletin concerning the lay educational program on cancer also include a request that each county medical society elect a representative to the county executive committee of the Women's Field Army.

It was agreed that the next meeting of the committee shall be held subject to the call of the chairman.

Adjournment followed.



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## TUBERCULOSIS CONTROL

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The following extracts from an article by Dr. Esmond R. Long, Director of the Henry Phipps Institute in Philadelphia, appeared in the August 1939 issue of the Pamphlet, *Tuberculosis*, issued monthly by the National Tuberculosis Association:

### TUBERCULIN ANERGY AND THE VARIABILITY OF TUBERCULINS

The question of anergy to tuberculin in the presence of presumptive tuberculosis has been the subject of much recent discussion. Especially noteworthy have been the carefully conducted and concisely reported studies of Lumsden, Dearing, and Brown on tuberculosis infection in school children in Coffey County, Alabama and Giles County, Tennessee which were reported recently in the *American Journal of Public Health*. These investigations compared the incidence of positive reaction to several different kinds of tuberculin, in relation to the incidence of lesions diagnosed as tuberculosis in x-ray films, and found not only a lack of correlation between the tuberculin reaction and the presence of shadows in the x-ray film interpreted as representative of tuberculous lesions, but a wide discrepancy in the percentage of positive reactions to different samples of tuberculin. The lack of correlation between tuberculin reaction and x-ray examination was most conspicuous in the case of films showing shadows interpreted as calcified lesions of primary tuberculosis.

#### SIGNIFICANCE OF CALCIFICATIONS

Numerous observers have noted the absence of tuberculin allergy in cases with presumptive evidence of old tuberculous infection in the form of calcified intrathoracic masses with the frequency of negative reaction in the presence of pulmonary calcifications ranging from seventeen to forty-six per cent in different series in the hands of different observers.

These various studies have provoked widespread comment. It is not the fact that allergy may be absent in the presence of calcified lesions that is surprising, but that this may occur so frequently. Failure of reaction in the presence of calcified nodules is an old observation familiar to all workers in the field. In passing, it may be noted that in the first article published on the use of the Purified Protein Derivative of Tuberculin certain cases with pulmonary calcification were recorded, with failure

of reaction either to type of tuberculin or Old Tuberculin.

Most investigators in the past interpreted these cases as illustrations of obsolete infection, and there is increasing reason to accept this explanation. Specific examples with calcification, once positive and subsequently of lowered sensitivity or even negative to tuberculin, have been frequently recorded. A plausible explanation of the waning of allergy is to be found in reports of the sterility of most of the old calcareous foci of primary infection.

#### ALLERGY AND RECOVERY

More direct and significant evidence, however, on the waning of allergy with recovery from active lesions of tuberculosis is available in the records of BCG vaccination. Hundreds of thousands of human beings have been deliberately inoculated with controlled dosage of the attenuated but living BCG, and careful records have been kept of the intensity of the tuberculin reaction in relation to the course of the infection set up. In practically all of those infected intracutaneously with 0.15 mg. BCG or more, the reaction becomes positive in a few weeks. After reaching a period of maximum intensity it then tends to wane, and becomes negative after twelve months.

In the light of these observations of complete healing with eventual sterility of spontaneous human lesions, on the one hand, and decrescence and disappearance of the allergy produced by artificial human infection on the other, it would not be surprising if the tuberculin reaction eventually became negative in all of the cases of calcified primary lesions, if no further infection occurred. Indeed there is good reason to believe that in many cases of positive tuberculin reaction in the presence of calcified foci of tuberculous infection, the reaction is positive not because of the presence of the calcified lesion, but because of a later superinfection.

With the general decline of tuberculosis in the community, with corresponding lessening opportunity for reinfection, it is only to be expected that an increasing number of non-reacting cases with calcification will be found. It is well to keep the fact in mind that the calcified lesions discovered in any survey today represent not the index of tuberculous infection of the present period, but the remains of tuberculous infection in the past.

Moreover, there is still room for doubt that all the lesions commonly diagnosed as calcified nodules of primary tuberculosis are really tuberculous. Particularly in a community where calcifications are present in half of the adolescent population, as in certain of the regions studied by Lumsden and Gass and their colleagues, it is pertinent to inquire

if there could be any other cause than tuberculosis for the calcifications found.

#### ANERGY

Anergy in the presence of active tuberculosis of the primary or "childhood" type has been less frequently recorded and in some cases merely represents delay in the appearance of allergy. It was pointed out long ago that x-ray evidence of developing primary tuberculous infiltration of the lung may precede the development of a positive reaction. Anergy in the presence of well established lesions believed to be tuberculous is subject to much uncertainty, because of the difficulty in proving the diagnosis of primary tuberculous infection in these cases. The shadow itself is not distinctive, and it is the course of the lesion rather than its character, as seen in the x-ray film, that is important. Infiltrations that disappear are apt to be of pyogenic origin; those that persist are probably tuberculous. Most of the reported cases of anergy in the presence of active primary tuberculosis have not been given the benefit of a time trial. A diagnosis based on persistence of the infiltration, is still subject to much question, for increasing understanding is bringing to light other causes for such infiltrations, such as unresolved pyogenic infections, bronchiectasis, etc. In brief, in a case of tuberculin anergy in the presence of supposed active primary tuberculosis, the burden of proof is on the diagnosis of tuberculosis.

As to the necessity of a reliable tuberculin there can be no argument. It is true and has been known for years that the various preparations of Old Tuberculin on the market vary greatly in their capacity to elicit reaction. It was this fact that led to the search for a substance of specificity, stability and constant potency, that could be substituted for the highly variable Old Tuberculins in use. It is hoped that the Purified Protein Derivative of Tuberculin will fulfill this need.

#### TUBERCULIN IN CASE-FINDING

For present purposes a distinction must be drawn between tuberculin x-ray surveys for the separate purposes of determining the infection index regardless of morbidity, and tuberculosis case-finding. No serious doubt has been expressed over the value of tuberculin as a mechanism for detecting ordinary cases of pulmonary tuberculosis. The studies cited, do not deal with this subject. On the other hand, studies of the tuberculin reaction covering more than thirty years, show that the overwhelming majority of patients with frank tuberculosis are positive to tuberculin; that they react to small doses and to most of the many types of tuberculin

on the market. Clinical disease has not infrequently been observed to develop with alarming rapidity after the development of a positive tuberculin reaction, while there is no proven record of its development in the absence of a positive reaction.

In the light of this experience no reason is apparent to depart from the present established custom of using tuberculin in case-finding programs.

On the other hand, good reason has been given for pause in our efforts to determine epidemiological indices of the amount of infection until more knowledge is obtained. The concept of infection that is adopted will have to meet the issue of existing as opposed to obsolete invasion by tubercle bacilli. From a practical standpoint it seems doubtful if there is nearly as much significance in determining how many ever have been infected by tubercle bacilli, as in finding how many harbor bacilli at the moment. Whether this can be done or not remains to be seen.

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## MEDICAL ECONOMICS

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### CLOUD COUNTY INDIGENT PLAN

Cloud County Medical Society has recently entered into the following indigent medical plan with its county board of Social Welfare. Individual contracts will be executed with individual members of the society.

THIS AGREEMENT is made and entered into by the Social Welfare Board of Cloud County, Kansas, Party of the First Part, hereafter referred to as the Board, and ..... of ..... Cloud County, Kansas, Party of the Second Part, hereafter referred to as a Welfare.....

The Board authorizes the County Director of Social Welfare of Cloud County, Kansas, hereafter referred to as the County Director, as its agent to perform certain duties hereafter specifically referred to in this Agreement and Plan.

It is hereby agreed by between the Parties that effective the.....day of ....., 19....., the Board appoints Party of the Second Part as a Welfare..... to furnish necessary health services and/or supplies to persons eligible for welfare benefits and receive consideration therefore as hereafter provided in the Plan which is a part of this Agreement. Party of the Second Part accepts said appointment and agrees to furnish necessary health services and/or supplies and accept consideration therefore as herein provided as full payment of any claims due under this Agreement.

It is further agreed by and between the Parties that this Agreement shall be binding upon both parties until terminated after thirty days notice given in writing by the Party desiring termination of the Agreement to the other Party.



## PLAN

I. ELIGIBILITY AND CERTIFICATION. The only persons eligible for health services and/or supplies under this Plan shall be those members of welfare cases certified in writing by the County Director. Such certification shall be furnished promptly to the Welfare Physician designated thereon and a copy of such certification shall be furnished to the Case Head. Such certification shall be in the following form:

SOCIAL WELFARE BOARD Type of case.....  
 Case Number..... Concordia, Kans. Monthly cost \$.....  
 Case Head..... Address.....  
 The.....persons listed below are certified as eligible to receive health services and/or supplies as authorized on the proper form by the Welfare Physician whose name is endorsed hereon regularly until.....  
 or only for the following special purpose:.....  
 This certification is subject to discontinuance upon notification of the Welfare Physician.  
 1.....  
 2.....  
 3.....  
 4.....  
 5.....  
 6.....  
 7.....  
 8.....  
 9.....  
 Endorsements  
 To Dr.....  
 County Director .....  
 Date .....  
 To Dr.....  
 County Director .....  
 Date .....

NOTICE: 25% of the scheduled charges for all health services and/or supplies is to be deducted from the claim against the Social Welfare Board and may be collected from the Case Head.

II. PAYMENTS FROM ELIGIBLE CASES. Twenty-five per cent (25%) of the scheduled charges for all health services and/or supplies is to be deducted from the claim against the Social Welfare Board and may be collected from the Case Head. Nothing in this section shall prohibit any person or firm from furnishing health services and/or supplies without collecting said twenty-five per cent of charges but no claim may be made directly or indirectly against the Board for same because of such failure to collect.

III. CREATION OF WELFARE FUND No. 2. There shall be created in the office of the County Treasurer of Cloud County, Kansas, a special welfare fund to be known as Welfare Fund No. 2 into which shall be paid each month from other unencumbered welfare funds the following amount for each case certified as eligible during the prior month to receive health services and/or supplies: One Dollar (\$1.00) for the first member of the case certified as eligible and Fifty Cents (\$0.50) for each additional member of the same case certified as eligible; Provided, however, that should the fund be insufficient to afford the payment of sixty-six and two-thirds per cent ( $66 \frac{2}{3}\%$ ) of the net claims to be pro-rated as described in Section VI (Fourth subsection), that sufficient funds to provide such payment shall be paid as a surplus into Welfare Fund No. 2 from any other unencumbered welfare funds. Payments shall be made into said Welfare Fund No. 2 upon proper claim signed by the County

Director listing the following information of which a copy shall be furnished to each Welfare Physician showing payments into the fund for the cases certified to him:

Welfare Physician:

Case No..... Case Head..... Date Certified..... Date Expiring..... No. Eligible..... Monthly Cost.

IV. AUTHORIZATION FOR SERVICES. Subject to the conditions of this Plan (see particularly Sections V and VIII), the Welfare Physician designated on the certification furnish ordinary physician's services and/or supplies to the eligible members of the case and may authorize in writing in advance that the following be furnished from the sources designated by the Board:

A. From Welfare Druggists: drugs, biologicals, appliances, and other health supplies;

B. From Welfare Dentists: dental services;

C. From Welfare Hospitals; Laboratory tests for non-hospital cases;

D. From Welfare Physicians and Surgeons: services scheduled at a charge of less than ten dollars (\$10.00).

The counter-signature and approval of the authorization by the County Director shall be required in addition for the following:

E. From Welfare Physicians and Surgeons: services scheduled at a charge if of ten dollars (\$10.00) or more.

F. From Welfare Hospitals: hospitalization.

V. LIMITATION OF AUTHORIZATIONS. The total scheduled cost of health services and/or supplies which may be furnished or authorized by any Welfare Physician without the approval and counter-signature of the County Director may not exceed one-half of the amount of the funds transferred to Welfare Fund No. 2 for cases certified as eligible to said Welfare Physician during the current month.

VI. PAYMENTS FROM WELFARE FUND NO. 2. The Social Welfare Board of Cloud County, Kansas, shall at its regular monthly meeting in July, October, January, and April pay upon proper claim the net cost after deducting the twenty-five per cent (25%) of charges payable by the Case Head of health services and/or supplies for eligible cases authorized by Welfare Physicians under this Plan. The total costs shall be calculated as follows:

First, to Welfare Hospitals for hospitalization at three dollars (\$3.00) per day, including room, general nursing care, operation room, laboratory tests, drugs, and surgical dressings to hospital patients, and for laboratory tests for non-hospital patients at the schedule of laboratory fees attached which is made a part of the Agreement with Welfare Hospitals.

Second, to Welfare Druggists for drugs, biologicals, appliances, and other supplies at regular retail prices.

Third, to Welfare Dentist for dental work at the schedule of fees attached which is made a part of the Agreement with Welfare Dentists.

Fourth, to Welfare Physicians and Surgeons. The entire balance in Welfare Fund No. 2 remaining after the payments described in the foregoing sub-sections shall be pro-rated equally among the reasonable and just claims presented by Welfare Physicians and Surgeons; Provided, however, that not more than one hundred per cent (100%) nor less than sixty-six and two-thirds per cent ( $66 \frac{2}{3}\%$ ) as provided in Section III, shall be paid on any such net claims. Statements and claims shall be based on the schedule of fees attached which is made a part of the Agreement with Welfare Physicians and Surgeons.

VII. CLAIM FOR PAYMENT FROM WELFARE FUNDS. All authorization-statements and reports shall be submitted not later than the third day of the month

following authorization by the Welfare Physician and shall be on forms furnished by the Board.

VIII. POLICY AND ARBITRATION. Any services and/or supplies shall be for the immediate relief of a present, actual, and acute health condition unless there shall be a sufficient surplus in Welfare Fund No. 2 to guarantee payments without pro-rating any charges. Any dispute as to the necessity of any service and/or supplies or as to the reasonableness of any charges or claims shall be arbitrated by a disinterested Welfare Physician, appointed by the claimant, together with the County Director and the Board and the majority decision of this group shall be final and binding on both parties.

#### IX. ATTACHMENTS LISTED:

Attachment, Page 4—Medical and Surgical Schedule.

Attachment, Page 5—Medical and Surgical Schedule (Continued).

In Witness Whereof, the Parties have hereunto set their hands and seals the.....day of....., 193.....

#### SOCIAL WELFARE BOARD OF CLOUD COUNTY, KANSAS

Party of the First Part

Chairman .....

Member .....

Member .....

Party of the Second Part,  
.....

Attest:  
Secretary

#### MEDICAL AND SURGICAL SCHEDULE

Any fees not covered in the schedule shall be approved by the County Director in advance of furnishing the service.

Office calls and home and hospital visits limited to one charge per day, except by special authorization of the County Director.

Hospital visits on medical cases charged the same as home visits.

Hospital visits on surgical cases begin charges one month after the operation.

## NEWS NOTES

### 1940 STATE MEETING

Sedgwick County Medical Society has appointed the following committees to prepare arrangements for the 1940 annual session of the Kansas Medical Society which will be held in Wichita on May 13-16.

General Chairman: Dr. Charles Rombold.

Treasurer: Dr. A. W. Fegty.

Program Committee: Dr. J. L. Kleinheksel, Chm.; Dr. Thor Jager, Medicine; Dr. W. J. Kiser, Surgery; Dr. V. L. Scott, Pediatrics; Dr. G. B. Morrison, Urology; Dr. E. M. Seydell, Ear, Nose and Throat; Dr. Geo. Gsell, Eye; Dr. H. C. Clark, Gynecology; Dr. A. E. Bence, Orthopedics; Dr. R. E. Padfield, General Practice.

Arrangements: Dr. N. L. Rainey, Chm.; Dr. E. H. Terrill, Dr. B. P. Meeker, Dr. J. E. Wolfe, Dr. W. C. Bartlett, Dr. N. C. Nash, Dr. L. B. Putnam, Dr. H. O.

Anderson, Dr. W. J. Biermann, Dr. C. D. McKeown, Dr. A. E. Hiebert.

Entertainment: Dr. F. L. Menehan, Chm.; Dr. F. J. McEwen, Dr. H. E. Marshall, Dr. J. V. Van Cleve, Dr. O. C. McCandless, Dr. H. R. Hodson, Dr. R. L. Drake, Dr. W. T. Elnen, Dr. W. G. Gillett.

Technical Exhibits: Dr. G. E. Milbank, Chm.; Dr. E. D. Carter, Dr. C. W. Miller, Dr. Harold Hyndman.

Scientific Exhibits: Dr. J. S. Hibbard, Chm.; Dr. C. A. Hellwig, Dr. H. N. Tihen, Dr. S. L. Stout.

Publicity: Dr. J. S. Reifsneider, Chm.; Dr. George Gsell, Dr. E. L. Mills, Dr. L. A. Donnell.

Greeters: Dr. C. H. Warfield, Chm.; Dr. R. H. Maxwell, Dr. H. N. Tihen, Dr. A. P. Gearhart, Dr. Allen Olson, Dr. J. D. Clark, Dr. F. E. Kunce, Dr. H. F. O'Donnell, plus all members of Program Committee.

Golf and Skeet: Dr. J. W. Shaw, Chm.; Dr. G. B. Morrison, Chm.; Dr. R. A. West, Dr. E. S. Edgerton, Dr. L. S. Roberts, Dr. E. C. Rainey, Dr. H. E. Friesen, Dr. E. E. Tippin, Dr. L. A. Sutter, Dr. T. S. Finney.

Physicians' Assistants: Dr. C. C. Brown, Chm.; Dr. A. L. Ashmore, Dr. S. MacLeod, Dr. A. F. Rossitto, Dr. R. M. Gouldner, Dr. A. P. Gearhart, Dr. Earl Mills.

The program committee has announced that Dr. Morris A. Fishbein will be one of the guest speakers at the annual meeting. It is thought that Dr. Fishbein will speak before the general session the afternoon of May 15, 1940 and will be a guest speaker at the banquet in the evening.

#### COMMITTEE CHAIRMEN MEETING

Dr. C. C. Nesselrode, President, plans to hold a meeting of all committee chairmen during the early part of September.

Meetings of this kind have been held during the last several years for discussion and coordination of committee work. Each committee will be assigned definite projects at the meeting which they will be asked to study and complete during the current year.

#### MINUTES

The following are the minutes of a meeting of the Committee on Study of Heart Disease recently held in Emporia:

The meeting of the Committee on the Study of Heart Disease was held in Emporia on Sunday, July 30, 1939. Members present were Dr. Philip W. Morgan, Emporia, Chairman; Dr. F. A. Trump, Ottawa; Dr. Maurice Snyder, Salina; Dr. H. H. Jones, Winfield, and Dr. James C. Stewart, Topeka. Clarence G. Munns was present as Executive Secretary.

First item of discussion was ways and means in which morbidity and mortality statistics on heart disease can be more efficiently and extensively compiled. The following recommendations were adopted by the committee:

1. That the committee issue bulletins to the county medical societies and the official representatives pointing out the need for more complete diagnostic data in regard to the etiology, anatomy and physiology of heart disease, and suggesting methods wherein the medical profession can cooperate in this objective. Dr. Morgan was asked to prepare a bulletin of this kind.



2. That Dr. Morgan communicate with the Kansas State Board of Health to determine possibilities for obtaining questionnaire information of the above kind on all Kansas deaths in which heart disease is suggested. That this questionnaire be handled through the cooperation of attending physicians and that the questionnaire include a means for standard classification; information on etiology, anatomy and physiology; the number of sudden death cases which have not been attended previously by a physician, remarks, etc.

3. That Dr. Morgan communicate with the American College of Physicians to determine possibilities for obtaining assistance in establishing a more concise and better understood means of standardizing the classification of heart disease in hospitals—(ie: The classification recommended by the American Heart Association).

The central office was asked to bulletinize the list of physicians who agreed to assemble standardized records on 100 cases each, and to ask these physicians to continue and complete their part of this program.

Dr. Morgan was asked to forward a recommendation to the program committee of the 1940 state meeting that a speaker on heart disease be included on that program.

Decision was made that the central office shall forward a questionnaire to the county medical societies and official representatives for the purpose of determining the number and location of electrocardiographs in Kansas; the names of the physicians who operate them; and the names of other physicians who are interested in heart disease.

The central office was asked to communicate with the American Heart Association to determine whether it will be agreeable for the Journal to reprint with credit the monthly articles issued by that organization in its pamphlet "Concepts of Modern Cardiovascular Disease". If approval is granted the committee requested that the central office discuss this possibility with the Editorial Board.

The committee expressed itself as being in favor of considering the possibility of organizing a Kansas Heart Association or a Society section on Heart Disease which it is believed might profitably hold at least two meetings each year—one for post graduate study each fall, and another at each state meeting. Dr. Morgan was asked to discuss possibilities in this connection with the officials of the American Heart Association.

The Central office was asked to correspond with all Kansas physicians interested in heart disease (the criteria being those who own electrocardiographs, etc. as indicated by county society secretaries in answer to above questionnaire) and to determine whether they would be interested in a post graduate course which it was believed might be arranged on the following basis:

A five day course consisting of morning, afternoon, and evening meetings to be held during next October at Emporia. The course to be designed particularly for the benefit of physicians who own electrocardiographs and have taken other post graduate courses in heart disease, and the curriculum to consist of approximately three hours a day of cardiology, and three hours a day on electrocardiography. The expense of the course to be apportioned among those in attendance. The number of matriculants be limited

to twenty-five or thirty as a larger number would make fluoroscopic and other demonstrations impossible, or would necessitate handling the class in groups.

The committee also decided that if sufficient interest is demonstrated Dr. Morgan should be asked to establish dates for the courses, and to complete the necessary arrangements. Tentative date: October 16 to 20 inclusive.

The question of consultation with patients at post graduate courses was discussed, and decision was made that it should be the policy of the committee to discourage consultation unless the attending lecturer specifically approves.

Discussion of reviewing books on heart disease for the Journal, and on conducting a regular section in the Journal was tabled until the next meeting of the committee.

Agreement was had that the next meeting of the committee shall be held upon the call of the chairman.

Adjournment followed.

The minutes of a recent meeting of the Committee on Control of Cancer are published in the Cancer Section of this issue.

## CLINICAL CONFERENCE

The Kansas City Southwest Clinical Conference to be held in Kansas City, Missouri, October 2-5 will have the following guest speakers:

Chamberlain, Wm. Edward, M.D., (Roentgenology, Radiology), Philadelphia, Pennsylvania, Professor of Radiology and Rentgenology, Temple University School of Medicine.

Curtis, George M., M.D., (Surgery), Columbus, Ohio, Professor of Surgery and Surgical Research, Ohio State University College of Medicine.

Fay, Temple S., M.D., (Neurology), Philadelphia, Pennsylvania, Professor of Neurology and Neurosurgery, Temple University School of Medicine.

Haden, Russell L., M.D., (Internal Medicine), Cleveland, Ohio, Chief Physician, Department of Medicine, Cleveland Clinic.

Harris, Robert Inkerman, M.D., (Orthopaedic Surgery), Toronto, Ontario, Canada, Associate in Surgery, University of Toronto Faculty of Medicine.

Jackson, Chavalier L., M.D., (Otology, Laryngology, Rhinology), Philadelphia, Pennsylvania, Professor of Bronchoscopy and Esophagoscopy, Temple University School of Medicine.

Joslin, Elliott P., M.D., (Internal Medicine), Boston, Massachusetts, Medical Director, George F. Baker Clinic, New England Deaconess Hospital.

Lahey, Frank H., M.D., (Surgery), Boston, Massachusetts, Director, Lahey Clinic.

Luedde, William H., M.D., (Ophthalmology), St. Louis, Missouri, Professor of Ophthalmology and Director of Ophthalmology, St. Louis University of Medicine.

McKelvey, John L., M.D., (Obstetrics and Gynecology), Minneapolis, Minnesota, Professor of Obstetrics and Gynecology, University of Minnesota Medical School.

Mitchell, A. Graeme, M.D., (Pediatrics), Cincinnati, Ohio, B. K. Rachford, Professor of Pediatrics, University of Cincinnati College of Medicine.

Peet, Max Minor, M.D., (Surgery), Ann Arbor, Michigan, Professor of Surgery, University of Michigan Medical School.

Rosser, Curtice, M.D., (Proctology), Dallas, Texas, Professor of Proctology, Baylor University College of Medicine.

Simonds, James P., M.D., (Pathology), Chicago, Illinois, Professor of Pathology, Northwestern University Medical School.

Sleyster, Rock, M.D., (Psychiatry), Wauwatosa, Wisconsin, President, American Medical Association.

Sprague, Howard B., M.D., (Internal Medicine), Boston, Massachusetts, Secretary, American Heart Association.

Thomas, Gilbert J., M.D., (Urology), Minneapolis, Minnesota, Associate Clinical Professor of Urology, Medical and Graduate Schools of the University of Minnesota.

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## RADIUM

Announcement has been made in Washington that a quantity of radium available under the National Cancer Act will be forwarded to Sedgwick County for use in the Sedgwick County Tumor Clinic. The National Cancer Act provides that radium owned by the government may be loaned indefinitely to physicians or clinics on approval of the Radium Loaning Committee of the National Cancer Institute.

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## LOCATION

Information has been received that the town of Atrica in Harper county affords a good location for a physician, as no physician at present is located there. An office, equipment with instruments and facilities, is available at a moderate monthly rental.

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## PAMPHLETS

The Bureau of Medical Economics, of the American Medical Association has recently announced the issuance of two new pamphlets: One is entitled "Organized Payments for Medical Services" and the other "Factual Data on Medical Economics." The pamphlet on Organized Payment for Medical Services contains chapters and sections on the following subjects:

Consistent Progress—Care of Indigent Sick, Contract Practice, Action on Sickness Insurance, Social Security Legislation, Hospital Insurance, National Health Program, A Uniform Policy.

Care of the Indigent—Public Duty to Care for Indigent, Development Since 1930, Federal Emergency Relief Administration, Medical Society Experiments, Development in County Medical Society Plans, Lump Sum Contract, Medical Society Surveys, Plan With Fee Schedule, Necessity of Medical Society Cooperation.

Effects of Social Security Legislation—Effects on Maternal and Child Welfare, Medical Society Cooperation, Michigan Filter System, Maternal Welfare in Pennsylvania, Development of Public Health Services, Cooperation in Michigan, Legal Provisions in Wisconsin, Relief Plan in Washington.

Farm Security Administration—Types of Plans, Pooled Fund Plans, Loan Plans, Contract Association Plans, State Agreements, Extent of Plans, Arrangements for Clients, Experience Gained.

Medical Care Arrangements Organized by Medical Societies—Postpayment Plans; Prepayment Medical Care Plans; Unit Service Plans; Cash Indemnity Plans; Modified Cash and Unit Plans; Credit and Collection Bureaus; Other Medical Service Plans; Medical Service Plans in Industry, Medical and Hospital Benefit Organization, Union and

Fraternal Arrangements; Attitude of Medical Profession; Cash Versus Service Insurance; Deception of Insured, Extension of Cash Systems, Legislation.

Group Hospitalization—Form of Organization, Initial Funds and Sales Programs, Essentials of a Group Hospitalization Plan, Relations with State and County Medical Society, Hospital Insurance Companies.

Planning An Organization of Medical Services—Place of Financial Arrangements, Importance of Prevention, Educate the Public, Investigate Before You Plan, Persons for Whom the Plan Is Intended, Confusing Classifications, Where a Problem Exists, The County Medical Society, Conclusion.

The pamphlet on Factual Data on Medical Economics contains the following general titles: Physicians; Number of Physicians in Relation to Population, Population per Physician in the United States, Number of Medical Schools and Graduates, Population per Physician According to Size of Community, Percentage of Physician in General Practice and Specialties, Population per Physician in Certain Countries.

Hospitals: Hospitals and Hospital Beds in the United States, General Hospital Beds, Trend of General Hospital Bed Construction and Bed Occupancy, Distribution of Certain Medical Facilities and Percentage of Population Filing Income Tax Returns, Hospital Beds and Bed Occupancy in General Hospitals, Supply and Utilization of Beds in General Hospitals, Nervous and Mental Disease Hospitals and Hospital Beds.

Vital Statistics: General Mortality—Death Rates in the Death Registration Area, General Death Rates of the United States Registration area and Certain Foreign Countries, Standardized Annual Death Rate for Specified Causes, Mortality for Specified Causes—Mortality Trends in the United States, Diphtheria Mortality, Diphtheria Mortality in United States and Certain Foreign Countries, Tuberculosis Mortality, Tuberculosis Mortality in England and Wales and the United States, Mortality from Cancer, Automobile and Other Accidental Deaths, Maternal and Infant Mortality—Decline in Maternal Mortality, Maternal Mortality in Urban and Rural Areas for White and Other Races, Decline in Infant Mortality, Infant Mortality in the United States.

Sickness Insurance: German Sickness Insurance, Revenue and Expenditure; Duration of Incapacitating Illness, German Sickness Insurance; Principal Provisions of National Sickness Insurance System.

Medical Services and Economic Status—Charts.

The society has arranged to have a copy of the pamphlet "Organized Payments for Medical Services" forwarded to each county medical society. Additional copies of this pamphlet and the one entitled "Factual Data on Medical Economics" may be obtained from the Bureau of Medical Education, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

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## EXHIBITS

Physicians who have had experience with Halls of Health and similar lay medical exhibits will be interested in the attendance figures at the medical and health exhibit at the New York World's Fair. More than 2,000,000 people had viewed the exhibit by June 15 and frequently it has been necessary to close the exhibit during peak hours. On one day the exhibit drew forty-nine percent of the total paid Fair attendance. The exhibit is said to be one of the Fair's most popular attractions.



## FEDERAL GRANTS

An amount of \$4,379,250 will be allotted to the States during the next twelve months, under the new venereal disease control program, according to announcement made by the United States Public Health Service. The Federal allotment will be supplemented by the State and local appropriations and by special grants from foundations and private organizations. The allotment is based on population, extent of the venereal disease problem and the financial needs of the sections of the country. To receive the grants the States must meet certain requirements in prevention, treatment and control of venereal diseases.

## INDICTMENT

The following is the opinion handed down by Justice James M. Proctor of the United States District Court for the District of Columbia on July 26th in the Anti-Trust indictment against the American Medical Association. As the opinion indicates Justice Proctor held that the American Medical Association and the practice of medicine are not a "trade" within the meaning of the Anti-Monopoly and Anti-Trust statutes.

The indictment charges a conspiracy to restrain trade in the District of Columbia in violation of section 3 of the Sherman Anti-Trust Act. The defendants are American Medical Association, a national organization of physicians; two of its subordinate bodies, the Medical Society of the District of Columbia and Harris County Medical Society of Houston, Texas, also the Washington Academy of Surgery, not fully identified, and twenty-one individual doctors all members of the national body, some officers thereof, other members and officers of the Medical Society of the District of Columbia. All defendants have demurred to the indictment. It is very long, and only abbreviated references will be made to such parts as are deemed necessary to this decision.

Group Health Association, Inc. (hereinafter called association), is alleged to be an association of government employees, engaged "in the business of arranging for the provision of medical care and hospitalization to its members and their dependents on a risk-sharing repayment basis." Medical care is provided by a staff of salaried practitioners engaged in group practice under a medical director. A clinic is maintained, and limited hospital expenses are defrayed for the members and their dependents.

The defendants are alleged to have conspired (1) to restrain the association in its business of arranging for the provision of medical care and hospitalization to its members and their dependents, (2) to restrain such members in obtaining, by cooperative efforts, adequate medical care for themselves and their dependents from doctors engaged in group medical practice, (3) to restrain doctors serving on the medical staff of the association in pursuit of their callings, (4) to restrain other doctors in the District of Columbia, including some of the individual defendants, in pursuit of their callings and (5) to restrain Washington hospitals in the operation of their businesses.

The demurrers raise basic objections to the indictment. Of first importance is the contention that none of the alleged restraints has reference to a trade; that section 3 comprehends only those occupations in commercial life carried on in the marts of trade activity;

therefore, that the medical profession and the business of the association and hospitals do not constitute "trade" within the purview of the statute. Against this contention, the government's position is that all who are occupied in any activity whereby they supply money's worth for full money payment are engaged in trade; that section 3 does cover all such activities; therefore that the practice of medicine and the businesses of the association and hospitals do fall within the scope of the statute.

Is medical practice a trade within the meaning of section 3 of the Sherman Act? In my opinion it is not. I think the matter is settled by the Supreme Court in the case of *Atlantic Cleaners & Dyers v. United States*, 286 U. S. 427. That case squarely presented the question whether "trade" is used in a narrow sense, as importing "only traffic in the buying, selling or exchanging of commodities," or in a broader sense. It fairly called for a definition of the word. This the court undertook to give. In so doing, it declared that the word "trade" was used in section 3 of the Sherman Act in the general sense attributed to it by Justice Story in the case of the *Schooner Nymph*, 1 Summ. 516; 18 Fed. Cases 506, No. 10,388. The court, intending to give a full and broad meaning, adopted for its own definition for "trade" the language of Justice Story in that early case, quoting therefrom as follows:

"The argument for the claimant insists that 'trade' is here used in its most restrictive sense and as equivalent to traffic in goods, or buying or selling in commerce or exchange. But I am clearly of opinion that such is not the true sense of the word, as used in the thirty-second section. In the first place, the word 'trade' is often and, indeed, generally used in a broader sense as equivalent to occupation, employment or business, whether manual or mercantile. Whenever any occupation, employment or business is carried on for the purpose of profit, or gain, or a livelihood, not in the liberal arts or in the learned professions, it is constantly called a trade. Thus, we constantly speak of the art, mystery or trade of a housewright, a shipwright, a tailor, a blacksmith and a shoemaker, though some of these may be and sometimes are, carried on without buying or selling goods."

## PROFESSION EXPRESSLY EXCEPTED

Thus we have this recent controlling decision defining the word trade and expressly excepting the learned professions of which admittedly the practice of medicine is one. The decision is in harmony with others rendered before and after the *Cleaners and Dyers* case. See *Fed. Trade Comm. v. Raladam*, 283 U. S. 643; *Graves v. Minnesota*, 273 U. S. 400 and *Semler v. Board*, 294 U. S. 608. The restraint alleged against the doctors in specifications three and four of the charge are clearly not within the purview of the statute. I cannot accept the refinements of thought whereby it is argued by the government that the Court in quoting Justice Story was not defining "trade" but merely illustrating the narrow and broad concepts of the word. Nor does the decision lend any support to the idea that by enacting section 3 Congress intended to exercise all its plenary power over the District of Columbia to prohibit restraints against all business activities of the citizen. The Court has simply said that Congress meant to deal effectively with the evils resulting from contracts, combinations and conspiracies in restraint of

trade—not all restraints upon every business pursuit, but only those affecting trade.

Doubtless, in the fulness of its power over the District, Congress could have prohibited restraints upon all occupations of the citizen. But there is nothing in the history of the legislation to suggest the need for such a broad reach of power and clearly it was not intended.

The government has cited many English and American cases dealing with restrictive covenants ancillary to agreements by doctors concerning the sale or conduct of their practice, in which the courts have applied the common law doctrine as to "contracts in restraint of trade." It is argued that these cases have, in a legal sense, drawn medical practice within the orbit of trade, giving to the word a common law meaning to include the professions. From this, it is further argued that at common law restraints upon the practice of medicine were "restraints of trade" and that Congress in the Sherman Act used the term in such a sense. But those cases are beside the point.

They do not involve any question as to whether medicine is a trade. They accepted the universal understanding of it as a profession. Nor do they define "trade." They merely apply a rule of law. At most, such cases serve only to illustrate the development of a legal doctrine, having its origin in contracts concerning tradesmen, which became known as the doctrine "against restraint of trade," and which in course of time was extended and applied to agreements by doctors respecting their professional practice.

#### MUST FIND STATUTE SANCTION

The case of *Pratt v. Medical Association*, 1 K. B. 244, upon which the prosecution places much reliance, is interesting in the similarity of facts there proven and here alleged; yet the legal aspects differ greatly. The suit was a civil action in tort by the plaintiff doctors to recover damages for malicious injury to their means of livelihood. The claim was ground upon common-law principles which hold every man liable in damages for wrongful injury to another's means if livelihood.

Combination was not the gist of the action; that circumstance only increased the damage. So here, if the livelihood of group practitioners has been injured by the wrongful acts of the defendants, they too have redress in a civil court. But the charge in the present case is criminal, and to stand must find its sanction solely in the statute.

Coming now to other specifications of the charge, one, two and five. Is the association, or are its members or the hospitals, engaged in trade within the meaning of section 3 of the statute? The association is alleged to be a nonprofit cooperative association of government employees engaged in the business of arranging for the provision of medical care and the hospitalization to its members and their dependents.

The plan and purpose, it is charged, was to hinder and obstruct the association in procuring and retaining on its staff qualified doctors; to hinder and obstruct its doctors from the privilege of consulting with others and using the facilities of the Washington hospitals, and to hinder and obstruct the association in obtaining access to hospital facilities for its members and its doctors from treating and operating upon their patients in hospitals. The foregoing references to Washington hospitals in the plan set forth forms the only support for the fifth specification, charging a purpose to restrain the business of operating said hospitals.

#### ADOPTED NEW DEFINITION

In previous discussion of the *Cleaners and Dyers'* case I have expressed the view that the Court in giving to the word "trade" its full meaning adopted the definition of Justice Story as its own. That definition covers both the narrow and the broad understanding of the term. Its most restricted sense comprehended "traffic in goods or buying and selling in commerce and exchange." Manifestly, neither the association, its members nor the hospitals are engaged in that sort of trade.

Nor do they, in my opinion, come within the broader class of manual or mercantile pursuits carried on for profit or gain without buying or selling goods. The business of the association was not of a manual or mercantile nature. It was a non-profit cooperative institution whose corporate object was to render service in providing medical and hospital care for its members. The argument for the government that the business of the cleaners and dyers involved merely the sale of service, and yet was held to be a trade, overlooks the fact that the very essence of that service was the skilful use of labor and material, quite equal to the "art, mystery or trade" of a tailor, blacksmith or shoemaker, mentioned by Justice Story in illustration of manual and mercantile pursuits falling within the category of trade.

Other federal and state decisions bear out the conception of trade as an occupation or pursuit of a mercantile character. See *Semler v. Board*, 294 U. S. 608; *Toxaway Hotel Co. v. Smathers & Co.*, 216 U. S. 439; *U. S. Hotel Co. v. Niles*, 134 Federal 235; *Harms v. Cohen*, 279 Federal 276 (as to musical composers); *People v. Klaw*, 106 N. Y. S. 341 (as to the theater); *Metropolitan Co. v. Hammerstein*, 147 N. Y. S. 532 (as to grand opera); *Werth v. Fire Insurance Companies' Adjustment Bureau, Inc.*, 171 S. E. 255 (as to the insurance business); *Whitcomb v. Reid*, 31 Miss. 569 (as to dentistry), and *State v. McClellan*, 31 A. L. R. 527 (as to the laundry business).

#### POSITION HELD EXTREME

The thesis of government counsel taken from the opinion in *Brighton College v. Marriott*, 1 K. B. 312, 316, that "trade" embraces all who habitually supply "money's worth for money payment" and their contention that the statute should be so broadly construed represents an extreme position which does violence to the common understanding of "trade," rejects authoritative decisions of our courts and ignores cardinal rules of statutory construction.

Their proposition encompasses all gainful work of the citizens. Can it be supposed if Congress had any such drastic intention it would not have made the purpose clear? Certainly it is not for the courts to stretch an old statute to fit new uses for which it was never intended. *United States v. Gradwell*, 243 U. S. 476, 488. That would be nothing short of "judicial legislation." The charge that members of the association were restrained (specification 2) is devoid of legal substance. Their efforts to obtain medical care is expressed through the medium of the association, a corporate entity distinct from the individual members. Upon no theory can they be treated as engaged in the business of the corporation.

Finally, when the indictment is carefully studied in all its parts, each in relation to the others, it is difficult to escape the conclusion that in its substantial



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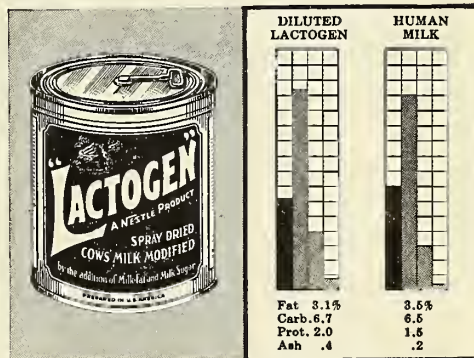
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realities the scheme set forth directly centered upon various forms of restraint to be exerted against physicians in rendering treatment and care to their patients, and that all else is incidental to that design. If restraint upon doctors was the only real direct and immediate effect, any indirect effects upon the association or hospitals would not suffice to support the charges as to them. *Standard Oil Co. v. United States*, 283 U. S. 163, 179; *Nash v. United States*, 229 U. S. 373.

#### SUFFICIENCY OBJECTIONS

The defendants have raised objections to the sufficiency of the indictment as a pleading. These go mainly to the claim that many of the allegations dealing with essential and material features of the charge are vague, indefinite and uncertain. The objections are far too numerous to deal with separately. There is merit to many of them. The indictment is afflicted with vague and uncertain statements. In some instances material facts are altogether lacking. An important instance concerns the charge that one purpose of the conspiracy was to restrain the business of the Washington hospitals.

The indictment is barren of any statement of the business methods used by a single hospital in the letting of facilities and service to patients. This is fatal to that particular specification, for without such facts it cannot be known whether loss of patients through operation of the scheme would injuriously affect the economic welfare of any hospital.

Moreover, the particular plan and purpose of the conspiracy as respects the hospitals is only inferentially stated in that part which deals with the plan and purpose of the scheme as against the association and its doctors. Such a method of stating the material part of the charge does not meet the fundamental requirement that a criminal accusation be stated fully, clearly and with directness and certainty. *United States v. Hess*, 124 U. S. 483; *United States v. Geare*, 54 App., D. C. 30; *McMullen v. United States*, 68 App., D. C. 302.

#### INDIVIDUAL CHARGES QUESTIONED

A question also arises as to whether the charge is laid against the individual doctors named in the caption. This is due to the pleader's statement that they "will be referred to hereinafter as the individual defendants," whereas thereafter the charge itself is laid only against "the defendants," who the caption indicates include only the several medical societies. It does seem that as to such simple, yet all-important matters, an indictment should be so drafted as to exclude any question whatever.

The inducement, as well as the charging part, setting forth the plan and purpose and acts done to effectuate the conspiracy, abound in uncertain statements. Inference, opinion and conjecture are also freely indulged. This is especially so in the inducement, much of which seems unnecessary to a statement of the charge. It is questionable whether some of it would be deemed relevant and competent in proof of the offense. Every indictment should be confined to a clear and dispassionate statement of essential fact. Thus, an accused can better know the exact offense with which he is charged and will not be confused in making his defense. Ordinarily improper matter in the indictment unnecessary to support the charges will not vitiate the indictment. It will be treated as surplusage and disregarded. But I doubt if such treatment would suffice to relieve these defendants of the prejudice likely to arise by an indictment which smacks so much of a

highly colored, augmentative discourse against them. It must be remembered that when a case is finally submitted to a jury for their secret deliberations the indictment goes with them.

#### ILLEGAL OPERATION CONTENTION

The contention is made that the association is operating illegally in the fields of medicine and insurance; that as its activities are unlawful they do not come under the protection of the statute against restraints of trade. The indictment describes the association as a nonprofit, cooperative society, organized under the laws of the District of Columbia, engaged in the business of arranging for the provision of medical care and hospitalization to its members and their dependents on a risk-sharing repayment basis. This is enough to indicate that it was organized under those sections of the general corporation laws providing for incorporation of societies for benevolent, charitable, educational, literary, musical, scientific or missionary purposes, including societies formed for mutual improvement or promotion of the arts. Thus, the view is strengthened that the association was not engaged in trade, for such corporate functions clearly would not fall under that category. However, I do not think it can be said from the bare allegations of the indictment, taken in their entirety, that the association is engaged in medical practice or insurance. Whether or not that is so could better be decided upon the evidence if in a trial it should be deemed pertinent to inquire into the question.

Finally, section 3 of the Sherman Act upon which the indictment is founded has been attacked by defendants as unconstitutional. It is argued that the statute is too vague and uncertain to fix a definite standard of guilt or inform one accused of violating it of the nature and cause of the accusation. I do not agree with the argument. If I did, the circumstances would not justify me declaring the statute invalid, for that would be unnecessary, hence inappropriate, in view of my holding that the indictment is bad on other grounds.

The several demurrers to the indictment are sustained. Judgment will be entered accordingly.

Immediately after the opinion was issued the Department of Justice released the following very unusual statement:

The Department of Justice will seek to reverse the decision handed down by Mr. Justice Proctor in the suit against the American Medical Association and others pending in the District of Columbia. This decision declares the indictment invalid on two grounds: First, that because of a restricted definition of the word "trade" in the Sherman Act, physicians are entitled to conspire with and boycott hospitals in order to exclude other members of their profession from the pursuit of their calling. Second, because the indictment does not inform the defendants of the crime with which they are charged.

The department makes this statement not for the purpose of criticizing the opinion but for the reason that it is important to inform physicians generally that, until the Supreme Court has acted, the government's prosecution policy toward boycotts in the medical profession is unchanged. None of the reasoning of the opinion persuades the department that doctors are free to engage in practices which would be illegal if they belonged to some other calling. In addition, any further restraints of the character included in the in-



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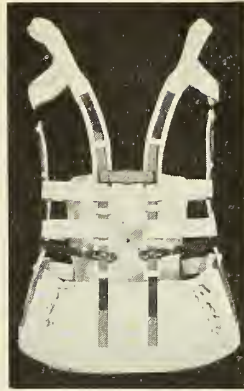
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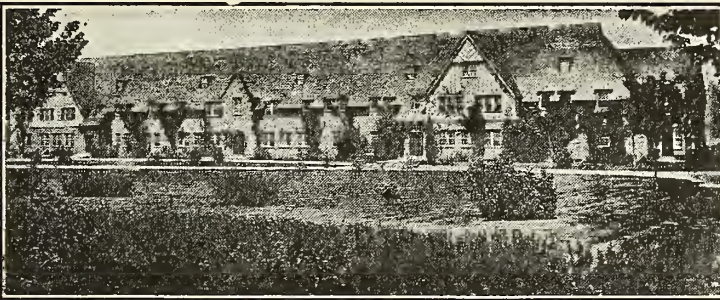


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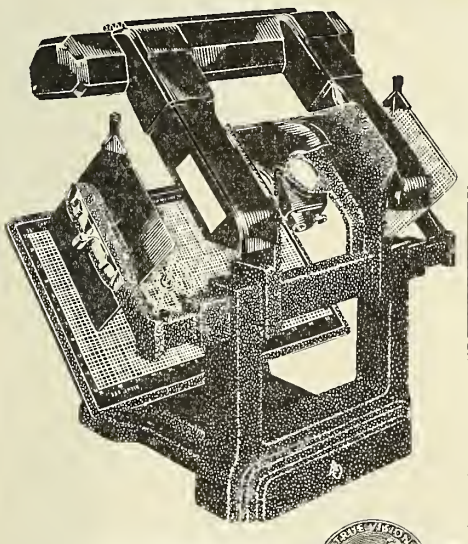
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dictment will also be subject to prosecution. It is important that physicians not be misled on this point for the reason that the District Court opinion is not a binding authority on other judges.

The department, recognizing the seriousness of the present uncertain situation, will use every effort to get a final decision from the Supreme Court at the earliest possible moment.

The second ground for declaring the indictment invalid is that the defendants were not sufficiently informed of their offense. The department, without any criticism of the opinion, feels that the defendants were fully informed by the indictment of the nature of the offense and were at no time in the dark as to the character of the charges made against them. It will therefore seek an appeal on this count also.

The fact that the decision partly rests on this second ground complicates the appeal. In most antitrust proceedings it is possible for the government to appeal directly to the Supreme Court and thus obtain a more speedy final decision. Under the present circumstances, such a direct appeal is at least doubtful and the government may be forced to go first to an intermediate appellate court. It may be that, because of the delay occasioned by the doubt as to a direct appeal to the Supreme Court, time will be saved if a new grand jury is called to consider another indictment in a different technical form. However, even if this is done, an appeal will be presented at the same time. These technicalities, which in no way affect the merits of the case, must be carefully investigated. Therefore an announcement of the exact steps which will be taken by the government will be made within the next ten days.

The attorneys for the American Medical Association made the following reply to the statement issued by the Department of Justice:

The warning issued by the Anti-Trust Division (of the Justice Department) to the medical profession generally, following the filing of the decision of the District Court on demurrer, was both impertinent and unnecessary.

It was impertinent because, as the division should know, the government has no jurisdiction whatever over the medical profession, save in the District of Columbia, and medical men elsewhere need pay no attention to the threats of the Anti-Trust Division.

The "warning" was unnecessary because the members of the medical profession did not, do not and will not violate any of the antitrust or other statutes in the pursuit of their calling.

Finally, with reference to the statement of the division that the present decision is not a controlling precedent and that new grand jury proceedings may follow, it is sufficient to reply that until the present ruling is reversed counsel for the defendants believe that it stands as an effective bar to any similar abortive attempts on the part of the division to make further legal "experiments" upon the doctors in the District of Columbia.

An appeal has not as yet been filed.

### SOCIALIZED MEDICINE

The following editorial published in the St. Louis Globe Democrat of May 16, is of interest to all physicians: There are possibly more doctors in St. Louis this week

than were ever brought together at any one time and place. The occasion is the annual convention, or conventions, of the American Medical Association, which has a membership of 112,000 and is almost completely representative of the medical profession of the country. Its programs call for presentation and discussion of many subjects of concern to its members, but there is one subject that overshadows all others in their professional interests and in their interest as citizens. That is the problem of Socialized Medicine and the possibility or the probability of its establishment in the United States by federal and state laws.

To this they are for the greater part opposed, and the Globe-Democrat is in sympathy with their position. Socialized Medicine is, of course, medical service under the control, direction and financial support of the state. Its persuasive object is to provide for general medical attention and care particularly for the lower income, or no income, classes of the nation. Included in it is an ultimate system of compulsory sickness insurance for the entire population. The opposition of the American Medical Association is not based upon selfish considerations, but upon the fundamental principle that free and independent individual initiative is essential to the progress of medicine and in the best interests of the health of the whole people. The creation of a great machinery of governmental regimentation would inevitably tend to the discouragement of individual initiative, and thereby impede the research and discovery by which alone the science of medicine is advanced. "The trend of compulsory insurance," it has declared, "is toward the mechanization of medicine, which because of the great human element involved in treatment of the sick would suffer from mass mechanical methods." With physicians largely subject to political regulation and direction the practice of medicine would be greatly influenced by political considerations. The personal element, which is so important in medical practice, both in the physician and in the patient, is in great degree eliminated from mass treatment of human ills, and necessarily so. Secure in their employment the majority of doctors within the system would naturally rest content with perfunctory examinations and relief measures. These and other objections which could be presented are not theoretical, but are the results of observation of the workings of Socialized Medicine in Europe. Those who have read "The Citadel" get a glimpse in its early chapters of the quality of medical service under Socialized Medicine among the coal miners of Wales.

It is well-supported contention of the great majority of physicians that the poor under Socialized Medicine would get less careful and effective attention than under the present systems of free public and private hospitalization and treatment, of free clinics, of sanitariums supported by public or private benevolence, not to speak of the free services constantly given by almost all doctors to patients unable to pay. In short, although Socialized Medicine has an attractive appearance its benefits, even for those to whom it makes the greatest appeal, are largely illusory.

The profession generally gives, and has always given, support and assistance to sound measures by the state for the protection of public health. In fact, it has initiated most of such measures. It has supported, and continues to support, the extension of facilities where needed for the treatment of the poor, and numerous doctors generously give their time and experience to such treatment. It has supported plans for voluntary sickness and hospitalization insurance. Indeed, we do not think the American Medical Association is opposed to any movement for the benefit



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of public health that does not handicap medical progress and that does not sacrifice the independence of the profession as a great and essential agency of human betterment. While it does not entirely condemn the Wagner national health bill, which is now under consideration by a Senate committee, it finds some of its important provisions highly objectionable, and in particular it criticises the vagueness of its terms which would authorize the expenditure of vast sums and place great powers in the hands of federal officials. But there can be no doubt that the Wagner bill, though it does not provide for compulsory insurance, would be the entering wedge for a general socialization of medicine by federal and state co-operation, mechanizing and regimenting medical practice, supported by tax levies, principally or wholly of the payroll type, which it is estimated would amount on the whole to over a billion annually. The vital interests of the medical profession are at stake in the issue which thus confronts it, and we hope it will continue to maintain the stand it has already taken in this matter that is of profound concern to the public welfare.—St. Louis Globe-Democrat.

### COUNTY SOCIETIES

The Golden Belt Medical Society held its quarterly meeting, July 6, in Manhattan. Approximately 100 doctors and their wives attended. Dr. Ben Carry of Detroit, Michigan, spoke on "Sulapyridine in the Treatment of Pneumonia" and Dr. C. C. Dennie of Kansas City, Missouri, spoke on "Skin Infection in Children." A dinner-dance was held during the evening.

An orthopedic clinic was held Friday, July 21, at Seneca, under the auspices of the Nemaha County Medical Society, the Seneca Rotary Club and the Kansas Crippled Childrens Commission. Dr. M. E. Pusitz of Topeka assisted in the clinic.

The Northwestern Kansas Medical Society and the Kansas Crippled Childrens Commission sponsored a clinic July 25, at Hoxie. Dr. F. E. Coffey of Hays assisted in the clinic.

The members of the Sedgwick County Medical Society were guests at the June meeting of the Sedgwick county druggists. Dr. Hal Marshall of Wichita was one of the speakers.

The Southeastern Kansas Medical Society held its annual election of officers at a meeting in Pittsburg on June 21. Dr. O. E. Stevenson of Parsons was elected as president and Dr. Claude Hamell of Parsons was elected as secretary-treasurer.

### MEMBERS

Dr. H. O. Anderson of Wichita has returned from Chicago where he studied a month in the orthopedic departments of Shrine Hospital for Crippled Children and the Cook County Hospital.

Dr. A. R. Chambers of Iola has recently been appointed as county health officer of Allen county for the coming year.

An article entitled "The Clinical Interpretation of Abdominal Pain" by Paul E. Craig, M.D., of Coffeyville, was published in the June and July issues of Clinical Medicine and Surgery.

Dr. Frederick Hall, formerly of Halstead has recently affiliated with Drs. Snyder and Jones in Winfield.

Dr. C. A. Hellwig of Wichita was a speaker at the dedication of the new Postmortem Room of the Kansas City Municipal General Hospital No. 1 on July 20.

Dr. C. W. Jones of Olathe was recently appointed consulting surgeon for the Kansas State Penitentiary at Lansing.

Dr. Letter Lewis formerly of Lindsborg has moved to McPherson where he will be associated with Dr. George R. Dean.

Dr. Lester K. Nix has entered practice in Wichita and will be associated with Dr. Bruce P. Meeker.

Dr. R. B. Osborn formerly of WaKeeney has recently leased the Russell Hospital in Russell. The hospital will be operated on the open staff basis. Dr. J. D. Munsell who formerly operated the hospital has moved to Texas.

The American Board of Internal Medicine recently announced the certification of Dr. Harold W. Palmer of Wichita as a diplomate of that board.

Dr. Leo V. Turgeon, formerly of Wilson and a member of the Kansas State Board of Administration for the past two years has opened offices in Topeka.

Dr. E. M. Seydell of Wichita was recently elected as a councilor of the American Otological Society.

### DEATH NOTICES

Dr. Edmond Ray Keith, 75 years of age, died at the Lawrence Memorial Hospital, on June 29, after a long illness. Dr. Keith graduated from the National University of Arts and Science Medical Department, St. Louis, Missouri, in 1891, at which time he came to Clinton. In 1903 he moved to Lawrence where he resided until his death. He was a member of the Douglas County Medical Society.

Dr. William F. Lunsford, 41 years of age, died July 4, of injuries recieved the previous night in an automobile accident at Nevada, Missouri. Dr. Lunsford was City Health Director of Kansas City, Kansas, at the time of his death, having been appointed to that position on May 5, 1936. He graduated from the University of Oklahoma School of Medicine in 1923. He was a member of the Wyandotte County Medical Society.

Dr. Harry Wolfe Nye, 66 years of age, died of chronic nephritis and chronic myocarditis July 6, at his home in Osborne. Dr. Nye was born in Dudley, Iowa, February 24, 1873. He graduated from the Drake University College of Medicine at Des Moines, Iowa, in 1897 and came to Osborne in 1906. He was a member of the Osborne County Medical Society.

### BOOK REVIEW

TREATMENT OF SPASTIC PARALYSIS by M. E. Pusitz, M.D., August 1938. Privately printed by the author. 208 pages.

This monograph has been prepared by the author from the literature and from his own material in his capacity as one of the orthopedic surgeons for the Kansas State Cripple Children's Commission.

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Universalis, Urticaria Pigmentosa, and Pityriases Rosea, in the etiology of Infantile Mycotic Eczema as a birth canal infection, and in the description of Keratoses and early Carcinomas.

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## NEW BOOKS RECEIVED

**LIFE AND LETTERS OF DR. WILLIAM BEAUMONT:** By Jesse S. Mayer, A.B., M.D., late associate in medicine in Washington University, St. Louis, Missouri. Published by the C. V. Mosby Company, St. Louis, Missouri. 327 pages and illustrations, with an introduction by William Osler, 1939.

**JEFFERSON, THE FORGOTTEN MAN:** By Samuel B. Pettengill. Published by America's Future, Inc., 205 East 42nd Street, New York, N. Y., at \$1.50, cloth bound, and \$1.00, paper bound. There are 249 pages.

**WHAT IT MEANS TO BE A DOCTOR:** By Dwight Anderson. Cloth, 96 pages. Price \$1.00 per copy. Published by the Public Relations Bureau, Medical Society of the State of New York, 2 East 103d Street, New York, N. Y. Paper covered copies may be secured for 25 cents.

**DISEASES OF THE NOSE AND THROAT:** By Charles J. Imperatori, M.D., F.A.C.S., professor of Otolaryngology, New York Polyclinic Medical School and Hospital, and Herman J. Burman, M.D., F.A.C.S., adjunct professor of Otolaryngology, New York. Second edition revised, with 480 illustrations, 726 pages, published by the J. B. Lippincott Company, Philadelphia, Pennsylvania. Including sections on The Examination of the Patient, The Nose, Accessory Sinuses of the Nose, The Nasopharynx, The Pharynx and Mouth, The Larynx, The Trachea, Bronchi and Lungs, The Esophagus, Peroral Endoscopy, Physical Therapy and Radiation, Allergy, Manifestations of General Diseases, and Laboratory Aids.

**SHORT STATURE AND HEIGHT INCREASE:** By C. J. Gerling. Published by the Harvest House, New York, 1939. Price \$3.00 per copy. Section divisions on: Height in Adults, Inheritance of Stature, Mechanism of Growth, Glands and Growth, Food and Growth, Age and Growth, Sleep and Growth, Disease and Growth, Drugs and Height, Exercise and Height, Devices and Height, Posture and Height, Clothes and Height, Weight and Height, Tables of Heights, Stature Aids, and Psychological Aids.

**SUPERFLUOUS HAIR AND ITS REMOVAL:** By A. F. Niemoeller, A.B., M.A., B.S. Published by The Harvest House, New York. Price \$2.00 per copy. Including chapters on: Superfluous Hair and the Glands, Causes of Superfluous Hair, Removal, Electrolysis, Diathermy, X-ray, Depilatories, Abrasives, Shaving, Tweezing, Waxes, Bleaching, Hair Removers and the Skin, and Home Treatment.

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**PRACTICAL DERMATOLOGY AND SYPHILIS:** By Harry M. Robinson, M.D., Professor of Dermatology, and Director of the Syphilis Clinic, University of Maryland, School of Medicine; Instructor in Medicine, Syphilis Division, Johns Hopkins Medical School. Published by P. Blakiston's Son and Company, Philadelphia. Chapter Titles as follows: Introduction, a discussion of Common Skin Diseases, Anatomy, Physiology, Pathology, Symptoms, Etiology, Toxic and Allergic Dermatoses, The Coccygenous Dermatitis, Venereal Diseases, Making a Diagnosis, Some Laboratory Procedures and Skin Therapy. Other chapters on: Syphilis, Muscular Conditions, Papular Conditions, Vesicular Conditions, Pustular Conditions, Conditions Involving the Scalp and Bearded Areas, Conditions Involving the Mouth, Sweat Disturbances, Conditions Involving the Nails, Annular Lesions, Conditions with Scars and Atrophy, Ulcer Conditions, and Excoriation Dermatoses.

**PERSONAL AND COMMUNITY HEALTH:** By C. E. Turner, A.M., Sc.D., Dr.P.H., Professor of Biology and Public Health in the Massachusetts Institution of Technology; Formerly Associate Professor of Hygiene in the Tufts College Medical and Dental Schools. Fifth Edition, published by the C. V. Mosby Company, St. Louis, Missouri, 1939. Divided into two main divisions, Personal and Community Health, with subdivisions on: The Field of Hygiene, Health Values, Nutrition, Digestion, Oral Hygiene, Respiration, Circulation, The Skin, Endocrines, The Sense Organs, The Hygiene of the Nervous System, Mental Hygiene, Body Mechanics, Foot Hygiene, Reproduction, Heredity, Narcotics, Disease Prevention, Communicable Diseases, Immunity, Three Great Plagues, Food Control, Water Supply, Waste Disposal, Material and Child Hygiene, School Hygiene, Industrial Hygiene, and Disinfection and Disinfectants. Containing 652 pages, 127 illustrations and four color plates.

**THE COMMONWEALTH FUND:** 41 East Fifty-seventh Street, New York, announces the publication of the following new books on pneumonia: *Pneumonia, With Special Reference to Pneumococcus Lobar Pneumonia*, by Roderick Heffron, M.D., price \$4.50; *A Handbook, Pneumonia And Serum Therapy* by Frederick T. Lord, M.D., and Roderick Heffron, M.D., price \$1.00; and *The Biology Of Pneumococcus, The Bacteriological, Biochemical and Immunological Characters and Activities of Diplococcus Pneumoniae*, by Benjamin White, Ph.D., with the collaboration of Elliott Stirling Robinson, M.D., Ph.D., and Laverne Almon Barnes, M. D.

**HEART PATIENTS, THEIR STUDY AND CARE:** By S. Calvin Smith, M.D., Sc.D., formerly special heart examiner for the Surgeon General's office during the World War at home and abroad. Published by Lea & Febiger, Philadelphia, 1939, price \$2.00 per copy. Chapters on: Treating the Heart Patient Rather Than the Heart, Complaints of Heart Patients, Surveying the Patient's History, Physical Examination of the Heart, Laboratory Aids, The Heart as a Barometer of the Emotions, The Irregular Pulse and Its Clinical Significance, Bradycardia and Tachycardia, Blood-Pressure Estimates, Endocardial Conditions, Chronic Valvular Heart Defects, Myocardial Conditions, Heart Enlargement, Angina Pectoris, Coronary Artery Defects, Nervous Hearts, Cardiac Syphilis, The Heart in Motherhood, The Heart in Childhood, What Heart Patients Wish to Know, Selecting Nurses for Heart Patients, Self-care for



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**SCARLET FEVER:** By George F. Dick, M.D., D.Sc., Professor of Medicine, University of Chicago; attending physician, Billings Memorial Hospital; Editor, Department of Infectious Diseases, The Year Book of General Medicine, and Gladys Henry Dick, M.D., D. Sc. Published by the Year Book Publishing Company, Chicago, Illinois. Price \$2.00 per copy. Containing the following chapter heads: History, Etiology, Pathologic Anatomy, Symptoms, Varieties of Scarlet Fever, Complications, Diagnosis and Prognosis, Treatment, Preparation of Scarlet Fever Toxin, Skin Test for Susceptibility to Scarlet Fever, Prophylaxis, Specificity of Hemolytic Streptococci, Allergy, Antibacterial Immunity, Local Immunity and Oral Immunization. Eight plates and 149 pages, with a Reference and Index.

**A MANUAL OF FRACTURES AND DISLOCATIONS:** By Barbara Bartlett Stimson, A.B., M.D., Ded.Sc.D., F.A.C.S. Associate in Surgery in the College of Physicians and Surgeons, Columbia University, New York City; Assistant Attending Surgeon to the Presbyterian Hospital, New York City. Published by Lea & Febiger, Philadelphia, 1939. Price \$2.75 per copy. Illustrated with 95 engravings, 214 pages. Part One, considers: Definition, Classification and Diagnosis of Fractures, Bone Repair in Fractures, Symptoms and Signs of Fractures, Principles of Treatment of Fractures, Details of Technique in Treatment. Part Two, considers: The Upper Extremity, Injuries to the Shoulder Girdle, Injuries at the Shoulder-Joint, Fractures of the Shaft of the Humerus, Injuries at the Elbow-Joint, Injuries to the Forearm, Injuries at the Wrist, Injuries to the Hand. Part Three, Considers the Trunk: Injuries to the Chest, Injuries to the Spine, Injuries to the Pelvic Girdle. Part Four, considers the Lower Extremity: Injuries at the Hip-Joint, Fractures of the Shaft of the Femur, Injuries at the Knee-Joint, Fractures of the Shaft of the Tibia and Fibula, Injuries at the Ankle-Joint, Injuries to the Foot.

**YOU CAN SLEEP WELL:** By Edmund Jacobson, M.D., Price \$2 per volume. Published in New York, by Whittey House, 1939. Chapter titles are as follows: You Lie Awake, You Seek a "Cure", You Feel Worse, You Try Sleeping Medicine, When Sleep Comes, What Prevents It, What Favors It, How To Sleep Well, Your Child's Sleep, Your Dreams, The Mind At Rest, Sleep in the Laboratory, Measuring Sleep, What is Sleep?

**SOCIOLOGY AND SOCIAL PROBLEMS:** By Deborah MacLug Jensen, R.N., B.Sc., Social Service Consultant to the Visiting Nurse Association, St. Louis; Lecturer in Nursing Education, Washington University; Formerly Assistant Director, School of Nursing, Washington University, St. Louis. Published by the C. V. Mosby Company, St. Louis, Missouri, 1939. Price \$2.75 per copy. Containing 341 pages. Subtitles are as follows: Man's Social Nature and The Development of Personality, Collective Behavior, The Community, The Family, Social Change, and Social Problems in the Modern Community.

**A TEXTBOOK OF OBSTETRICS:** By Charles B. Reed, M.D., F.A.C.S., Associate Professor of Obstetrics, Northwestern University Medical School; Head of Obstetrical Department, Wesley Memorial Hospital, Chicago, and Bess I. Cooley, R.N., Supervisor and Instructor, Department of Obstetrics, Wesley Memorial Hospital, Chicago. Published by The C. V. Mosby Company, St. Louis, 1939, with 209 illustrations and 476 pages. The contents con-

tains the following Chapter titles: Anatomy, Physiology and Embryology, Normal Pregnancy, Prenatal Care, Antepartum Hemorrhages and Some Surgical Complications, Anesthesia and Analgesia, Normal Labor, Management of Normal Labor and Nursing Care at Home and Hospital, Normal Puerperium and Nursing Care, Minor Technique and Subsidiary Operations, With Nursing Duties, Dystocia and the Technical Cooperation of the Nurse, The Abnormal Puerperium and the Responsibility of the Nurse, and The Supervision and Nursing Care of the Newborn Child.

## ABSTRACT

**Use Of Glasses For Nearsightedness:** Whether a near-sighted person can do without glasses all the time depends to a great extent on his temperament. If he is the highstrung type of person who must see clearly all the time and who, intentionally or unintentionally, squints and strains to see distinctly without his glasses, then he must wear them constantly. If, on the other hand, he is an amiable, easygoing, placid or even phlegmatic individual who accepts blurred vision passively as the price he pays for going without glasses, he can usually use his glasses or not as he desires.—Hygeia, The Health Magazine.

**Why Extra Salt Is Needed In Summer:** Two million glands operate at full tilt in summer to keep the body temperature down to normal by a natural cooling system of perspiration and evaporation, Harriet Morgan Fyler, Ph.D., Chicago, declares in her explanation of the need for using extra salt during hot weather, published in the August issue of Hygeia, The Health Magazine.

"In the course of this cooling much water is lost," she continues. "With the water go some of the important elements of the blood. Unless special reinforcements are rushed in to take their place, the blood suffers a sort of starvation, hence fatigue and loss of appetite."

A little salt in a glass of drinking water is thus an effective means of combating this loss. Using extra salt on food where one likes it is also a good practice. Many factories provide salt dispensers near the drinking fountains for their employees.

**Sulfanilamide's Success In Diseases Of Eye Due To Rapid Penetration—**The effectiveness of sulfanilamide in treating certain diseases of the eye is undoubtedly due to the fact that the drug penetrates the optic tissues and fluids fifteen minutes after being taken by mouth, John G. Bellows, M.D., and Herman Chinn, Ph.D., Chicago, state in The Journal of the American Medical Association for May 20.

With the exception of the lens, all the eye tissues and fluids attain their maximal concentration at about the sixth hour after administration. In the crystalline lens the peak is reached in about twelve hours. By far the most rapid rise in concentration occurs between the second and the third hour.

The daily administration of sulfanilamide given in two divided doses maintains practically the same level of concentration in the eye as the same quantity administered four times a day. Consequently the taking of the drug every twelve hours should be almost as effective as every six hours.

Since sulfanilamide taken by mouth penetrates into the eye so quickly and the levels attained are so high, there



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is little reason to give it by any other route when diseases of the eye are treated.

Your Chest Should Be Flat, says S. A. Weisman, in a little book written after examining many thousand school children and college students and determining the thoracic index—the ratio of the width to the depth of the chest. Contrary to the belief of the majority of physicians it was found that the round deep chest with a higher thoracic index is associated more frequently with tuberculosis than the wide flat chest. Correlating the thoracic index to age, sex, weight, height, vital capacity, racial stock and environment, he concludes that the round deep chest is associated with a retarded physical development, which occurs more frequently in an unsuitable environment than a more favorable one. Children with rounded shoulders and deeper chests should be watched carefully if tuberculosis is to be prevented. Weisman, S. A., Lippincott, 1938.

**Anemia Due To Sulfanilamide:** Although acute anemia, with a decrease of hemoglobin and white blood cells, is the most frequent serious complication of sulfanilamide medication, only two deaths from this cause have been reported, the second one being made by Simon Koletsky, M.D., Cleveland, in *The Journal of the American Medical Association* for July 22.

This type of anemia occurs more frequently in children than in adults. The development of the anemia is not related to the type of infection treated, the dosage of sulfanilamide or the concentration of the drug in the blood.

Dr. Koletsky states: "In every instance so far the anemia has developed during the first week of sulfanilamide treatment. The hemoglobin (red pigment of the blood) begins to fall between twenty-four and seventy-two hours after the beginning of medication and usually reaches its lowest level within the next three days."

The author's patient was treated with sulfanilamide for an acute pus-discharging mastoiditis. The anemic process began on the second day of treatment and progressed during the next three days. Jaundice was observed on the third day of treatment and the patient complained of headache and became disoriented. The condition of the patient's blood became steadily worse and he died in coma six days after treatment with sulfanilamide was begun. Death was attributed to the anemia and not to the infection.

Dr. Koletsky points out: "It is of interest that both patients who died (of this anemia) had syphilis. That syphilis may affect the hemopoietic (blood-manufacturing) system is indicated by the frequent development of secondary anemia in the second and third stages of the disease. The occurrence of these two fatalities in syphilitic patients raises the question as to whether some alteration of the hemopoietic apparatus incident to syphilis may be related to the fatal outcome.

"The prognosis in this complication is usually good. Rapid recovery follows withdrawal of the drug, forcing of fluids and blood transfusion. Transfusions should be given promptly, and repeatedly, if necessary, because sulfanilamide may produce sufficient hemolysis (separation of the coloring matter of the red blood cells from the cells) to cause death from anemia."

**Standard Procedure Is Described For Measuring Blood Pressure:** A standard procedure for taking and interpreting blood pressure, the technic of which will remove the wide variations that at times have been observed in blood pressure records of the same individual, is outlined in *The Journal of the American Medical Association* for July 22.

This method is recommended by fifteen eminent physicians, who comprise two committees for the standardization of blood pressure readings; one was selected by the American Heart Association and the other by the Cardiac Society of Great Britain and Ireland.

Apparent discrepancies in blood pressure readings of the same individual are not always due to changes in the pressure from time to time under different conditions but may be due to differences in the methods and interpretations used by the observers. A recent survey by several investigators revealed a serious lack of agreement among physicians as to the correct technic for taking and interpreting the blood pressure. Equally confusing was the situation among insurance companies as to what they should require of their examiners in this regard.

The committees state: "Certain factors inherent in the physician, such as variations in accuracy of hearing, must be recognized as important. A physician who is aware that his hearing has become impaired should use a stethoscope which is amplified to a greater extent, and in the event of marked deafness electrically amplified or other mechanical devices should be utilized.

"The recommendation of a standard procedure as outlined is not intended to discourage initiative when indicated in special situations."

**Stomach And Duodenal Ulcers Must Be Considered Chronic: Prevention Of Recurrences Is Impossible Unless The Victims Are Subjected To Rigid Medical Management:** Recurrences of ulcers of the stomach and duodenum never will be prevented until the disease is viewed as chronic and the victims placed under rigid medical management as are those afflicted with diabetes or pernicious anemia, Clarence F. G. Brown, M.D., Chicago, and Ralph E. Dolkart, M.D., Boston, declare in *The Journal of the American Medical Association* for July 22.

Citing their own experience to support this recommendation, they state: "We have found that sixty-eight per cent of the recurrences in our clinic occur during the spring and fall. By observing patients at regular intervals throughout the year and placing them under rigid medical management during these seasons as a prophylactic measure, we have reduced the incidence of recurrence by approximately fifteen per cent."

Explaining the causes of recurrence among their patients, Drs. Brown and Dolkart state: "Functional nervousness, including fatigue and anxiety, was by far the greatest detectable cause of recurrence. Next in importance was an acute infection such as a cold, an acute sore throat, a sinus infection, an acutely abscessed tooth, or stomach and intestinal inflammation. Of third consideration were the things put into the stomach by the patient, hamburgers and restaurant potato salad leading the list in foods, with salicylates and iron preparations prescribed by other physicians following closely."

No single form of treatment is successful in the management of chronic ulcer, the physicians point out. The chief aim of treatment is to protect the ulcerated area from irritation, and this goal can be attained by different routes.

## ANNOUNCEMENTS

The Medical Department Reservists of the Army and Navy will hold their eleventh annual Inactive Status Training Course at the Mayo Foundation, Rochester, Minnesota, October 8-22, 1939. All Medical Department





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Started ten years ago, this is the first school of its kind. The general plan of former years will be followed. Special work in clinics and hospitals will be offered during morning hours for those asking special assignments. Presentation of carefully selected subjects in military medicine are scheduled for the morning, afternoon and evening hours.

The Biological Photographic Association announces their ninth annual convention to be held September 14 to 16 at the Mellon Institute for Industrial Research, Pittsburgh. The program will be of interest to scientific photographers, scientists who use photography as an aid in their work, teachers in the biologic fields, and technical experts. Further information may be obtained by writing the secretary of the Biological Photographic Association, University Office, Elizabeth Steel Magee Hospital, Pittsburgh, Pennsylvania.

The Annual Conference of the National Society for the Prevention of Blindness will be held in New York, with headquarters at the Astor Hotel, October 26-28, 1939. The conference will be attended by physicians, teachers, nurses, social workers and many others interested in various fields of sight conservation. Information may be obtained from the office of the Society at Rockefeller Center, 50 West 50th Street, New York.

The next written examination and review of case histories (Part I) for Group B candidates will be held in various cities of the United States and Canada on Saturday, January 6, 1940, at 2:00 P.M. The Board announces that it will hold only one Group B, Part I, examination this year prior to the final general examination, instead of two as in former years. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held in June 1940. Applications for admission to Group B, Part I, examinations must be on file in the Secretary's office not later than October 4, 1939.

The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting in Atlantic City, New Jersey, on June 8, 9, 10, and 11, 1940, immediately prior to the annual meeting of the American Medical Association in New York City. Applications for admission to Group A, Part II examinations must be on file in the Secretary's office not later than March 15, 1940.

After January 1, 1942, there will be only one classification of candidates, and all will be required to take the Part I examinations (written paper and case records) and the Part II examinations (pathological and oral).

At the annual meeting of the Board, held in St. Louis on May 12, 1939, it was found necessary, on account of increased administrative expenses, to increase the application and examination fees. Effective May 12, 1939, these are as follows: Application fee \$15.00, payable upon submission of application for review by Board; examination fee \$85.00, payable upon notification to candidate of acceptance of the application and assignment to examination. Neither fee is returnable. This increase does not apply to candidates whose applications were filed prior to May 12, 1939.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

## AUXILIARY

Dear Auxiliary Members:

Only yesterday the flowers were beginning to bloom and we felt the touch of spring. Now we are in the midst of another Kansas summer. The golden grain has ripened and in many instances been harvested. As we hear the song of the cricket we know that in a flash our summer will be gone.

Vacations have consumed or are consuming our interest. There are those who can get away and enjoy a rest, and there are those, whose staying at home made it possible for others to enjoy a rest.

As we look forward to fall and to our years work let us give thought and consideration to the program. Choose one major objective and expand that through the year. The Medical Auxiliary can do much in Health Education for each community if it so desires. Let us sell our wares in a well planned and dignified manner.

Let me remind each chairman that she can get unlimited help from her National chairman and should not hesitate to ask for it.

Again I say it is a privilege to tell, talk and sell HYGEIA to all your neighbors. The more lay people we have reading this publication the better health we will have in our community and our State.

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# The Journal Of THE KANSAS MEDICAL SOCIETY

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## THE TREATMENT OF GASTRIC AND DUODENAL ULCER\*

Waltman Walters, M.D.\*\*

The similarity of the symptom complex associated with benign gastric ulcer to that of benign duodenal ulcer has led to the thought that they are lesions of similar type. They differ, however, not only from the standpoint of the type of tissue in which ulceration occurs, but also from that of the variable pathologic nature of the lesions themselves and from that of their response to both medical and surgical treatment. For example, the secretions of the stomach are acid whereas those of the duodenum are alkaline. The primary ulcer which occurs in the first portion of the duodenum is never malignant, whereas that which occurs in the stomach has a ten per cent chance of becoming malignant, according to Stewart, and a twenty per cent chance, according to Katsch. Healing of a duodenal ulcer leaves a scar which constantly deforms the duodenum, manifesting its presence on inspection and palpation, although many gastric ulcers, under appropriate treatment, whether medical or surgical, frequently heal without trace; a very few produce hourglass deformity. Gastric and duodenal ulcers differ in their physiochemical response to similar operations. If partial gastrectomy is performed for gastric ulcer, post-operative relative achlorhydria is the rule; this occurs in almost all cases. On the other hand, when partial gastrectomy of similar magnitude is performed for duodenal ulcer, relative achlorhydria results in from only twenty-five per cent (Billroth I) to sixty-five or seventy per cent (Polya) of the cases.

### GASTRIC ULCER

When a patient presents a history suggesting benign ulceration, it is of first importance that a roentgenologic examination be made by a competent roentgenologist to determine the exact situation of the lesion. A gastric ulcer always should be regarded

with the suspicion that it is an ulcerating carcinoma. This is particularly true of prepyloric lesions as well as of lesions on the greater curvature. At the Mayo Clinic, in dealing with gastric ulcers we proceed on the assumption that chronic ulcerating gastric lesions are malignant until they are proved to be benign. This has helped us in the early recognition and satisfactory removal of many small carcinomatous lesions of the stomach which, because of their temporary beneficial response to a medical regimen, otherwise might have been allowed to grow, under the erroneous impression that the lesions were benign.

The treatment of gastric ulcer is dependent on several factors, among which are: (1) duration and type of symptoms; (2) healing of the lesion, or its failure to heal under a medical regimen carried out in scientific fashion; (3) presence or absence of a crater, especially with respect to bleeding, and (4) presence or absence of pyloric obstruction.

### DURATION AND TYPE OF SYMPTOMS

When the symptoms have been of short duration and the ulcer is small, every attempt should be made to induce healing by nonsurgical means. Such methods of treatment have been commented on in detail by Eusterman,<sup>3,4</sup> Jordan and others.<sup>5,6</sup> A favorable clinical response to such medical treatment consists of relief of pain, disappearance of blood from the stool and disappearance of the niche seen on roentgenologic examination. In most instances, these criteria can be assumed to be of immediate value in determining the ability of the lesion to respond to medical measures; however, a number of years ago the late Charles McVicar called attention to the fact that such a response is not confined to benign gastric ulcers but that it may occur as well in the treatment of small, ulcerating, malignant lesions of the stomach. Exact information should be obtained from the patient as to whether a medical regimen has been instituted previously, and evaluation should be made of the accuracy with which it was carried out and the results which followed its use. For if one or more attempts have been made to cause the lesion to heal by a carefully controlled medical regimen, but with recurrence of the ulcerating lesion, the lesion should be removed surgically.

\*Read before the General Session of The Kansas Medical Society, Topeka, Kansas, May 2, 1939.

\*\*Division of Surgery, The Mayo Clinic, Rochester, Minnesota.

### HEALING OR FAILURE TO HEAL UNDER MEDICAL TREATMENT

In the period during which our patients who have gastric ulcer are being kept under observation and medical treatment is being employed, even if the lesion appears to be healing satisfactory, the patient is advised to undergo re-examination at intervals of three months for the first year, regardless of the presence or absence of symptoms, in order to determine that the ulcer has remained healed. If the ulcer recurs or if it fails to heal, surgical exploration is thought advisable. In a few cases, unfortunately, wherein response to the initial medical regimen seemingly was satisfactory, the patient failed to be impressed with the importance of repeated examinations either at the clinic or elsewhere, and returned later only to find that he had carcinoma of the stomach.

### PERFORATING GASTRIC ULCERATION WITH CRATER

The perforating gastric ulcer, with a crater more than 1.5 cm. in diameter, is likely to respond to a medical regimen. These ulcers, for the most part situated on the lesser curvature, will be found to have penetrated into the gastrocolic omentum, whereas some situated on the posterior wall, in most cases near the lesser curvature, may penetrate into the capsule of the pancreas. It might be inferred that this type of lesion is one in which malignant cells are most likely to be present. Although this may be the case, especially if the lesions have large craters, not infrequently the smaller ulcerating gastric lesions may be malignant ulcerating carcinoma which already has involved the lymph nodes when the patient presents himself for examination or treatment.

### GASTRIC ULCERS PRODUCING PYLORIC OBSTRUCTION

Ulcerating lesions of the stomach, either benign or malignant, if they occur on the lesser curvature, not infrequently produce so much disturbance of motility, as disclosed both by clinical and roentgenologic examination, that only the presence of pyloric obstruction can be determined, and in some of these cases the lesion is suspected of being a duodenal ulcer. Particularly is this true if the patient has had an ulcer-like type of dyspepsia for a prolonged period. Fortunately, in cases of pyloric obstruction, surgical procedures are usually advised, the presence of a gastric lesion is recognized at operation and its appropriate treatment is carried out. The roentgenologist's diagnosis that an ulcerating lesion of the stomach is malignant is almost certain to be correct, particularly if the meniscus sign of Carman is seen

in the course of roentgenoscopic examination,<sup>2,8</sup>. But the fact that an ulcer of the stomach is reported as being probably benign by the roentgenologist does not exclude the possibility that the lesion is carcinomatous. On this point I wish to lay great emphasis. On many occasions at operation, with small gastric ulcerations readily visible and palpable, the fact that the lesion was carcinomatous was not recognizable until microscopic examination proved the fact.

### TYPES OF OPERATION

The types of operation available in treatment of gastric ulcer consist of: (1) partial gastrectomy followed by anastomosis of stomach and duodenum (Billroth I) or of stomach and jejunum (Pola-Balfour), (2) excision of a portion of the stomach containing the gastric ulcer or destruction of the gastric ulcer by cautery, in some cases combined and, in other cases, not combined with gastro-enterostomy, (3) transgastric excision of the ulcer from the posterior wall of the stomach, and (4) sleeve resection of the stomach.

The type of operation to be selected for each case is dependent on the type of lesion, its size, its situation, its accessibility, the amount of deformity of the stomach that would result from its removal, and the general condition of the patient. In selection of the type of operation most suited to the patient or lesion, the general statement seems justified that partial gastrectomy, particularly for large gastric ulcers, with either a Billroth I, or a Pola, or a Pola-Balfour type of anastomosis, is the preferable procedure, provided that it can be performed with a mortality rate of three or four per cent. The reasons for this are: (1) the prompt relief of symptoms obtained, (2) the almost total absence of recurring ulceration, and (3) the fact that partial gastrectomy is the preferable procedure should the lesion prove to be malignant.

There is a place for destruction of the ulcer by cautery or for segmental resection of a portion of the stomach containing the ulcer, either operation combined with gastro-enterostomy. Whereas the mortality rate associated with partial gastrectomy for large gastric ulcers, in our experience at the clinic, has been approximately three to four per cent, destruction by cautery or excision of a gastric ulcer, combined with gastro-enterostomy, usually can be performed with a mortality rate not greater than that of gastro-enterostomy. Furthermore, the risk of any operation is one of the very important factors regarding the type of operation to be chosen. The working principle can be accepted that excision or destruction of small gastric ulcers by cautery, combined with gastro-enterostomy, is a suitable operation



of low risk and that partial gastrectomy, an operation of greater risk, can be reserved for the large, penetrating, frequently hemorrhagic, gastric ulcer.

On only two occasions recently have I been satisfied to perform segmental resection of a portion of the stomach containing the ulcer without also performing gastro-enterostomy. On both of these occasions the lesion was very large and was situated just below the junction of the esophagus and stomach. Partial gastrectomy would have been exceedingly difficult and would have been attended by great risk because both patients were large and obese and in poor condition. On that account, excision of that portion of the gastric wall which contained the ulcer was carried out with good results, which have persisted.

Similar good results can be obtained from trans-gastric excision of certain large, perforating gastric ulcers situated high on the posterior wall of the stomach. After excision of the lesion, the edges of the stomach are sutured together from inside the stomach and a portion of the gastrohepatic omentum is carried posterior to the stomach, to serve as a patch over the healing anastomosis.

As has been indicated, whenever possible, I prefer the operation of partial gastrectomy for accessible, large perforating gastric ulcers. I use the Billroth I, the Polya, and the Polya-Balfour types of anastomosis; the choice of one of these procedures depends on the situation of the ulcer, the mobility of the duodenum, the amount of fat in the transverse mesocolon and the accessibility of the avascular spaces in the transverse mesocolon. Partial gastrectomy can be applied in nearly all cases of gastric ulceration.

Gastric ulcers situated high on the lesser curvature and those situated high on the posterior wall of the stomach frequently are reported, on the basis of roentgenologic examination, to be of questionable accessibility to surgical removal. Their high situation is likely to be considered an additional reason for continuation of medical treatment which has failed to cause healing of the ulcer previously. That all benign gastric lesions are accessible to surgical treatment is, therefore, a point which deserves emphasis. On several occasions, because of the perforating nature of the lesion and its attachment, particularly to the capsule of the pancreas, and because of contraction and fixation of the stomach in the vicinity of the lesion, the roentgenologic appearance has been that the lesion was higher than actually it was.

Removal of that portion of the lesser curvature which contains a gastric ulcer as in the Billroth I or the Hofmeister-Polya resection, enables the surgeon to preserve a sufficient amount of the body of the

stomach and, particularly, the greater curvature, for its anastomosis with the duodenum or with the jejunum.

The particular field of usefulness of the Billroth I type of anastomosis lies in the ability it gives the surgeon to remove perforating ulcers high on the lesser curvature without removing too much of the stomach itself. Sufficient mobility of the duodenum must be present, however, to allow attachment of it to the proximal segment of the stomach without tension. In my experience, the Billroth I type of anastomosis, following partial gastrectomy and partial duodenectomy for duodenal ulcer, has not been as satisfactory a method of anastomosis as the Polya type; in a few of my cases, duodenal ulcer has recurred. Apparently, however, results are different when the operation is performed for gastric ulcer and ulceration does not recur. In such cases, study of gastric acidity subsequent to operation discloses that relative achlorhydria is obtained in practically every instance; this is in contrast with the low incidence of relative achlorhydria after the Billroth I type of anastomosis for duodenal ulcer, in which circumstance relative achlorhydria develops in but twenty-five per cent of the cases.

In my experience, most cases of malfunctioning gastrojejunal anastomosis, both subsequent to posterior gastro-enterostomy and to posterior Polya types of anastomosis following resection of the stomach, have been the result of choosing to make the anastomosis posterior to the colon, through a very short or a very large, fatty transverse mesocolon. In such cases, it would have been better to have chosen a longer loop of jejunum and to have made the anastomosis anterior to the transverse colon, as advocated by Balfour, combining the operation with entero-anastomosis.

The operation of sleeve resection for gastric ulcer was performed more frequently years ago than at present. It is an operation of considerable usefulness in a selected group of cases. Such cases are those in which partial gastrectomy of the Billroth or Polya type does not seem indicated because of the mechanical difficulties entailed or because excision of the segment of stomach containing the ulcer would not remove enough gastric tissue.

## RESULTS OF OPERATIONS

The results of a properly chosen, properly performed operation for gastric ulcer are among the best in surgery and recurrence of the ulcer, or disturbing symptoms without formation of ulcer, practically never are encountered. This is especially true if the operation performed is partial gastrectomy. Yet, similar good results have followed the more

conservative operations of excision or destruction of the ulcer, combined with gastro-enterostomy, in most cases. Although I have not seen a recurring ulcer after partial gastrectomy for benign gastric ulcer, during the past fifteen years I have operated on only five patients among whom gastric ulcer recurred after previous excision of a gastric ulcer, followed by gastro-enterostomy. Subsequent removal of the gastro-enteric stoma with removal of the ulcer and partial gastrectomy of the Billroth I, Polya, or Polya-Balfour type have been followed by excellent results and ulceration has not recurred.

In a study made of the postoperative gastric acidity of patients who previously had gastric ulcer and on whom different types of operations had been performed, the striking feature was the high frequency with which relative achlorhydria occurred, provided adequate drainage of the stomach had been obtained following operation. This was in contrast with the effect of similar types of operation performed for duodenal ulcer.

#### DUODENAL ULCER

A primary duodenal ulcer, as has been said on many occasions, never becomes malignant. Indications for operation in such cases are determined largely on the basis of whether or not complications such as perforation, obstruction and hemorrhage are present. Everyone is agreed that immediate surgical procedures are necessary when an intra-abdominal perforation of a duodenal or gastric ulcer occurs. When a duodenal ulcer has produced sufficient obstruction so that the patient's stomach is dilated with persisting gastric retention, the necessity for correcting this mechanical disturbance is well recognized. Repeated hemorrhages from a duodenal ulcer usually frighten the patient or the physician so that the patient is taken hastily to the surgeon or to the hospital. The statement that surgical treatment of lesions that would fall into these groups is advisable will find but few critics. On the other hand, the surgeon is very glad to refer to the medical man for treatment patients who have duodenal ulcer whose symptoms are mild and who have no complications. Particularly true is this if the patient is young and the symptoms have been of but short duration. There are patients, however, who have a long history of chronic duodenal ulcer, who have obtained over many years periodic relief of their symptoms by adherence to a modified type of Sippy diet and who have become so tired of it that they are willing to go to almost any end to be relieved of their symptoms. In such cases I do not hesitate to advise a surgical procedure.

#### TYPES OF OPERATION

The choice of operation for duodenal ulcer is largely dependent on these factors: the type of ulcer present, the age of the patient, the ability of the patient to withstand the required surgical procedure and the degree of gastric acidity associated with duodenal ulcer.

The condition of the patient must be taken into account primarily in the decision as to what type of operation is best suited, not only from the standpoint of the type of lesion present but also from that of the ability of that particular individual to tolerate successfully the various procedures which might be employed. Generally speaking, the safest operation for every duodenal ulcer in any individual is gastro-enterostomy performed under regional anesthesia. This is true in the large perforating obstructive type of duodenal ulcer particularly that occurring among debilitated, asthenic patients of either sex; especially is this so among females in whom the incidence of recurring ulcer is very low. It has been the general plan at the clinic, in the last few years, to accept the additional risk of partial gastrectomy and partial duodenectomy in order to remove a bleeding duodenal ulcer when the condition of the patient permitted. Yet, in many cases in which gastro-enterostomy alone was performed (either because of the large size of the duodenal ulcer, which did not seem to permit removal, or because of the condition of the patient, which was such that it did not seem he could stand the additional risk of partial gastrectomy), bleeding has not recurred. Similarly, we have been performing an increasing number of gastric resections for duodenal ulcer among certain types of patients. These patients have been carefully selected and might be said to fall into two groups: (1) those of the Jewish race who seem to have a greater than average tendency toward recurrence of ulceration following gastro-enterostomy, and (2) active, middle-aged individuals who have high gastric acidity. Included in this group are patients who, because of their character and habits prior to operation, might be expected not to exert much self-control as to diet, use of tobacco or alcohol subsequent to operation.

In making the decision as to the type of operation to be performed for duodenal ulcer, it should be kept constantly in mind that relief of pylorospasm and duodenal obstruction, and bleeding, too, if it is present, is essential. Of equal importance is reduction of gastric acidity and increase in the emptying time of the stomach. Both gastro-enterostomy and partial gastrectomy accomplish these objectives. Partial gastrectomy will produce relative achlorhydria in



a greater percentage of cases than gastro-enterostomy but whether or not ulcer will recur seems, for the most part, dependent on the resistance of the tissue used in the anastomosis to gastric secretions. When hydrochloric acid is relatively absent in this gastric secretion, recurring ulcer is likely to occur less frequently than when present in relatively large amounts. Achlorhydria occurs following operation for duodenal ulcer in only from sixty-five to seventy per cent of the cases; in the thirty or thirty-five per cent in which a relative achlorhydria is not obtained, if the resistance of the jejunum or duodenum to gastric secretion has not improved, the possibility of recurrence of ulceration is no less than it is following gastro-enterostomy. Fortunately in our experience, less than four per cent of our patients on whom gastro-enterostomy has been performed experience recurrence of ulceration.

Pyloroplasty and gastroduodenostomy were used more frequently in past years, when operation was advised, in some cases, without an adequate attempt being made to treat the ulcer medically. In many such cases, the duodenal ulcers were small, localized only on the anterior wall of the duodenum and lent themselves very readily to excision, division of the pyloric sphincter, or removal of a portion of it in enlarging the outlet of the stomach. In the majority of such cases, the operative results were very good, the risk was low, and recurrence of ulceration occurred in about the same percentage of cases as following gastro-enterostomy. In recent years, patients who have duodenal ulcer are operated on only after at least one or more attempts have been made to heal the lesion or at least control the patient's dyspepsia by a medical regimen. As a result, at operation the ulcers usually are found to be much larger, frequently multiple, and usually are associated with a considerable degree of fibrosis. As a result of this, considerable shortening of the duodenum has occurred and the patient has become fleshy; in other words, there is so little motility of the duodenum that performance of a large pyloroplasty is difficult and the stoma not very satisfactory. Since a pyloroplasty opening which is too small may produce sufficient stasis at this point to predispose to recurring ulcer, I have felt that, in such cases, gastro-enterostomy or partial gastrectomy is the preferable procedure.

The same indications for anastomosis posterior or anterior to the colon, whether after partial gastrectomy or in the performance of gastro-enterostomy, apply in treatment of duodenal ulcer as in treatment of gastric ulcer or gastric carcinoma. In other words, sometimes, because of the amount of fat in the transverse mesocolon, or the shortness of the transverse

colon, or the lack of space between the arcades of the transverse colic vessels, it would seem that the possibilities of malfunction of an anastomosis made posterior to the colon are comparatively great. Then the anastomosis is made anterior to the colon by using a longer loop of jejunum and combining with it, in most cases, an entero-anastomosis.

On several occasions, when examination of the anterior wall of the duodenum has given no evidence of ulcer, the crater of an ulcer on the posterior wall could be felt by palpating the duodenum between the thumb and forefinger. Occasionally, however, small ulcers on the posterior wall, the source of serious bleeding, are not palpable and can be recognized only by opening the duodenum and exploring its interior. This, we believe, is essential part of gastroduodenal exploration among patients who give a history of hematemesis.

#### RESULTS OBTAINED BY VARIOUS SURGICAL PROCEDURES

Relief of pylorospasm and obstruction. Both the medical and surgical treatment of duodenal ulcer must lead to efficient emptying of the stomach with absence of spasm in that organ and in the duodenum. Surgically, pylorospasm and pyloric obstruction may be relieved by direct surgical attack on the pylorus, such as pyloroplasty, gastroduodenostomy, or gastric resection, or indirectly by gastro-enterostomy. Pyloroplasty eliminates pylorospasm by division or resection of the pyloric muscle; at the same time the lesion should be removed if possible and a large pyloric outlet allowing free regurgitation of duodenal secretions into the stomach should be constructed. Theoretically gastroduodenostomy has much to commend it. The procedure can be performed safely and provides a large free communication between the stomach and duodenum. The disadvantage is that in cases in which it fails to maintain or control the symptoms, or in which a recurrence requires further operation disconnection of the anastomosis is difficult. Gastro-enterostomy relieves pylorospasm indirectly by diverting the gastric contents from the ulcerated, obstructed duodenum and allowing unobstructed passage of food from the stomach. Gastric resection accomplishes relief of pylorospasm by resection of the pylorus including the duodenal ulcer if possible, and by wide resection of the stomach with gastrojejunal anastomosis.

Emptying time. Surgical operation for duodenal ulcer must decrease the emptying time of the stomach; in other words, food must stay in the stomach a relatively short period so that there will be less stimulation of the acid gastric secretion by the presence of food and less gastric stasis. Pyloroplasty,

gastroduodenostomy, gastro-enterostomy and gastric resection, if properly performed, will result in a satisfactory emptying time of the stomach.

Reduction of the gastric acidity. To reduce the acidity of the gastric content is an important aim in surgical treatment of duodenal ulcer. Clinical and experimental research concerning the pathogenesis of gastric ulcer has indicated that the treatment which promises the greatest success is that which most effectively controls and neutralizes the acidity of the gastric content and excess gastric secretion, and at the same time corrects any impairment of the gastric function. Since a reduction in the gastric acidity follows almost any operative procedure which as a result of anastomosis between the stomach and duodenum or jejunum allows reflux of intestinal secretion into the stomach, it appears that a low postoperative gastric acidity is largely attributable to the dilution or neutralization which is produced by this reflux. This is substantiated by the fact that little reduction of the gastric acidity is accomplished if entero-anastomosis is also performed; but there is marked reduction after posterior gastro-enterostomy or the Polya resection when entero-anastomosis is not performed.

Removal of the antrum of the stomach does not seem to be necessary for the reduction of the gastric acidity since it contains none of the acid-secreting glands of the stomach. Its removal is included, however, in resections of the distal half to two-thirds of the stomach, including the pylorus.

There has been a considerable amount of controversy regarding the importance of the pylorus in the maintenance of gastric acidity. It is now more or less generally agreed that the pylorus is probably the source of a hormone which stimulates acid gastric secretion. The only advantage of leaving the pylorus intact, apparently, is that some of the difficulties of closure of the duodenum are obviated.

In spite of the evidence that removal of the pylorus is necessary in gastric resections to produce a reduction in the gastric acidity, it is generally agreed that simple pylorectomy without extensive gastric resection does not lower the gastric acidity materially, and further that in cases in which the Billroth I resection was performed and in which the pylorus was removed a much higher incidence of recurrence of ulcer has occurred than in cases in which a like amount of stomach has been removed by the Polya method and in which the factor of dilution from regurgitation of jejunal contents was present.

It is generally agreed that if a resection is performed for duodenal ulcer, it should be an extensive

one and that from at least half to two-thirds of the stomach should be removed.

Removal of the duodenal ulcer. Removal of a duodenal ulcer does not seem to be essential for surgical cure, since ulcers heal rapidly following gastro-enterostomy when they are not touched. In gastric resection the ulcer is removed, if possible, but if the ulcer is of a perforating type, any attempt at removal may seriously increase the risk, and this is not warranted. Removal of the ulcer apparently has little or no effect on gastric acidity.

In pyloroplasty or gastroduodenostomy the ulcer is usually removed, if possible; but since these procedures are best used in cases in which the acidity is low and in which there is some delay in the emptying time as a result of cicatricial stenosis of the pylorus, removal of the ulcer is not necessary. These procedures are of little value when the gastric acidity is high since neither the pylorus nor any of the acid-secreting portion of the stomach is removed and, as has been pointed out, there is very inadequate regurgitation of the duodenal contents into the stomach, and natural peristalsis carries the secretions forward.

After the Billroth I procedure, although both the pylorus and the antrum of the stomach are removed, the recurrence of ulcer is greater than following the Polya type of resection. This is probably attributable to the fact that there is an inadequate regurgitation of duodenal contents just as following gastroduodenostomy or pyloroplasty.

Prevention of the recurrence of duodenal ulcer. The aim of all treatment of duodenal ulcer is to heal the existing ulcer and to prevent recurrence of the ulceration. Unfortunately, at present, there is no treatment, medical or surgical, that will heal and prevent a recurrence of ulceration in every case. From fifty to seventy-five per cent of the cases of duodenal ulcer can be handled satisfactorily by medical management, but it is necessary for the medical regimen to be followed carefully without remission or the ulcer will recur. Likewise, ulceration will recur in some instances after all types of surgical procedure, particularly if an adequate medical regimen does not follow operation.

Many surgical procedures have been devised to prevent the recurrence of duodenal ulcer. Pyloroplasty is one of the simplest and safest surgical procedures that can be carried out. Gastroduodenostomy has apparently the same incidence of recurrence of ulceration as pyloroplasty and the indications for the procedure are practically identical. Like pyloroplasty, it theoretically has much to commend it. Both procedures are based on the concept that the tissues closest to the stomach should have the greatest resistance to irritation caused by the passing of acid gas-



tric sections and therefore, theoretically, they should be followed by a lower incidence of recurrence than procedures entailing diversion of the gastric content into the more susceptible jejunum. The disadvantage of gastroduodenostomy is that any secondary partial gastrectomy that may be necessary is often made quite difficult.

Gastro-enterostomy has been, and shows every indication of continuing to be, the most satisfactory surgical procedure for duodenal ulcer in most cases. As I have said, "gastro-enterostomy will heal more ulcers at a lower operative risk regardless of size or shape of the lesion than any other procedure." There is no question that for obstructing duodenal ulcers in the presence of low acidity, gastroenterostomy is the safest and best surgical procedure that can be performed. Gastroenterostomy can likewise be used to great advantage in the treatment of many large perforating ulcers. Gastric acidity can be controlled very satisfactorily in the majority of cases by the dilution and neutralization of the acid gastric secretion brought about by regurgitated jejunal content. Relative achlorhydria is produced in a definite percentage of cases in which gastro-enterostomy is performed.

The incidence of recurrent ulceration has stimulated surgeons throughout the world to find some still more satisfactory method of treating duodenal ulcer, and the method receiving the greatest attention at present is gastric resection. That in selected cases it gives excellent results is beyond question, and more and more surgeons who have been dissatisfied with the results of more conservative procedures have turned to it.

That resection is not all that it was hoped it would be, however, is evidenced by an increasing literature containing reports of recurrences. It goes without saying that there is tissue susceptibility to ulceration in any case in which recurrence develops after healing. Although gastric resection is becoming increasingly widely used as the surgical treatment of duodenal ulcer and many reports have been most encouraging, it must be remembered that it is a serious operation and cannot be undertaken lightly. Also, one must not forget that gastro-enterostomy is still a more conservative and safer procedure when properly performed on proper indications and gives results as satisfactory as those of surgery in almost any other field.

#### COMMENT AND SUMMARY

Unless the symptoms of gastric ulcer are of short duration and the response to carefully supervised medical treatment is prompt and permanent, the

condition today is generally considered to require surgical treatment.

The problem of treatment of duodenal ulcer is still unsolved. No methods of treatment have been advanced that uniformly control gastric acidity in every case. Statistics seem to be of small avail in consideration of the individual case, and each patient must be treated according to the merits of his individual case and all the factors relating to it. Recurrence of ulceration means that (1) gastric acidity has not been adequately controlled, or (2) the patient is constitutionally predisposed to peptic ulcer and has a marked tissue susceptibility to ulceration. Tissue resistance to inflammation and ulceration from the hydrochloric acid of gastric secretion is what the successful surgical treatment of duodenal ulcer depends on, for if the tissue is resistant to hydrochloric acid, the patient will have a good result from the recognized types of surgical procedures without recurring ulceration; whereas if the tissue is susceptible to ulceration and if hydrochloric acid continues to come in contact with such susceptible tissues, ulceration will recur. Unfortunately there is no way at present to measure tissue resistance to acid gastric secretion.

#### REFERENCES

1. Balfour, D. C.: Restoration of gastro-intestinal continuity by means of anticolic gastrojejunostomy following partial gastrectomy for cancer of the pyloric end of the stomach. *Surg., Gynec. & Obst.* 25:473-477 (Nov.) 1917.
2. Carman, R. D.: A new roentgen-ray sign of ulcerating gastric cancer. *J.A.M.A.* 77:990-992 (Sept. 24) 1921.
3. Eusterman, G. B.: Gastric and duodenal ulcers; factors essential to their successful medical management. *Wisconsin M. J.* 34:473-477 (June) 1935.
4. Eusterman, G. B. and Balfour, D. C.: *The stomach and duodenum.* Philadelphia, W. B. Saunders Company, 1935, pp. 457-462.
5. Jordan, Sara M.: The present status of peptic ulcer. *New England J. Med.* 203:917-920 (Nov. 6) 1930.
6. Jordan, Sara M.: A review of the gastric ulcer problem. *J.A.M.A.* 107:1451-1456 (Oct. 31) 1936.
7. Katsch: Quoted by Hurst, A. F.: Carcinoma of the stomach. *Lancet.* 2:1455 (Dec. 18) 1937.
8. Kirklin, B. R.: The value of the meniscus sign in the roentgenologic diagnosis of ulcerating gastric carcinoma. *Radiology.* 22:131-135 (Feb.) 1934.
9. Stewart, M. J.: Quoted by Walton, Sir James: Carcinoma of the stomach. *Lancet.* 1:1101-1107 (May 16) 1936.

Tuberculin Sensitivity has been used in Cleveland as a means of finding early cases of pulmonary disease in the adolescent child without great cost. The small and slowly decreasing number of reactors in the first grade and the high schools, the low morbidity and mortality in both sexes below the thirty-five year limit, and the drop in unreported cases all support the theory that a consistent use of this method of attack should make tuberculosis a relatively rare disease in about ten years. The fewer cases there are in a community, the more necessary it is to use the tuberculin test among children to locate them. Tuberculin testing eliminated tuberculosis among cattle. It can do the same for man using the reaction as a means of finding tuberculosis in the child's environment rather than in the child himself. *Edwards, Jour.-Lancet*, 1939, 58.

## THE APPROACH YEARS\*

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The process of growing old is natural and physiological. Beginning with the advent of effervescent youth, life progresses to tense middle age and in turn drifts into senescent decline and ends in death. These changes occur gradually and imperceptibly when not altered by disease, but uncomplicated self-determined physiologic old age is indeed a rare accomplishment. Life seems to end as it began—dependent upon others. Whether one reaches the tranquil years as a sturdy individual or whether he arrives with the handicaps of physiological inadequacy or burdened with cardio-renal disease or otherwise suffering from physical and mental deterioration the result of vascular degenerative processes, has been accepted as the irony of fate rather than a controllable probability. Rarely might it occur that one's desire to live long and remain active may become an actual accomplishment.

There are two forces that militate against an increase in the latter years of life; first, the fact that people desire to live their lives in their own way, and, second, their choice to live fast rather than in the easy relaxed mode of our grandfathers. The abandon with which youth hurls itself at the task of living typifies modern civilization. No one takes time for deliberation. Impulsive decisions increase the strain and multiply the opportunity for hurry. Electrical intercommunication and rapid transit keep us conscious of an urge to lose no time. Speed becomes a mania. The days are all too crowded and the nights too short. Time is inadequate. The more power and the more drive, the greater thrill and the greater self-neglect.

Barring the disastrous effects of infection and disease youth reaches convincing maturity with physiological reserve sufficient for an added lifetime of two generations. What may happen to that reserve is not necessarily nor always of his determination, but it is our purpose to stress here certain methods of conservation which we believe will pay individual dividends in extended efficiency, increased physical comfort, amplified mental security, and added years of activity. When the reserve of youth has been spent in riotous living it is too late. It is important, therefore, by the fifth decade that one begin to control one's self and one's environment to the purpose of arriving at senescence with zest of

physical activity and mental acuity sufficient to insure relative independence. Whether it were better to live on, as some do, in reckless abandon, indulgent of desire and heedless of caution, to shorten life by the infirmities of disease or sudden death; or to live in restricted submission to a disciplined appetite and controlled activity thereby to add more years to man's lengthening expectancy with the chance of becoming a senile nutritional dotard, as some do, is a question that every man claims the right to answer for himself.

The heritage of a long life expectancy has come to the child of today thru man's philosophy of "live and let live." Born of a spirit of altruism the crusade against infant mortality and premature death, in progress for four score years, broke down the jungle law of "survival of the fittest" and has reached its acme in twentieth century scientific medicine and governmental interest in child welfare and public health protection to raise man's expectancy in America to an all-time high of sixty-one years. Hitherto, therefore, the sphere of old age has been broadened by protecting helpless infancy and dependent childhood. By contrast any further appreciable extension of longevity must be accomplished at the other extreme of life through a selfish motive to extend and increase every man his own years of desire. With due consideration of others he must nevertheless resolve to give every day, that forethought of himself, which continued mental development, the preservation of physical efficiency, and the perpetuation of youthful habits may require.

This is a problem more vast because those involved are self-assertive, their individual interests varied and their personality reactions long since determined. It is time, however, for the reassertion of the principles of Roman prowess not in the building of man power, but rather in its conservation. It is time that we point out to a curiously avid laity the means by which they may maintain physical efficiency and mental vigor in a body that must deteriorate. The prevention of disease, the minimizing of structural wear and tear, the perpetuation of physiological adequacy and the projection of youthfulness into late adult years is that long hoped for accomplishment for which we all yearn.

But to yearn is not to strive. Few are willing to make the sacrifice. With his new toy of increased years to be used for leisure or for work, for pleasure to himself or as a burden to others, man has changed little. The idea that at twenty-one a man has no further responsibility than to himself is still prevalent, and it is manifest in a determination to live intensively rather than a desire to live long. He covets economic freedom with a ruthless disregard of

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health security, and, indulging selfish pleasures, his chief aim in life is to "lay up for a rainy day"; but when that day arrives he finds his unused reserve dissipated and impoverished. What he would have done leaves little for salvage; what he might have done gives us food for thought.

There is no immutable law that fixes man's life cycle, no foreordained circumstance that governs his exitus. The law of the survival of the fittest rewards him with increased years who maintains the greatest degree of fitness. But the desire to live long must precede by two decades the desire to live. He who wants to live in old age must perchance begin before senescence arrives, while there is yet unused power and sustained resiliency. Born of a determination to not passively resign to old age without resisting it and in the spirit of expectation, one after fifty may continue to grow mentally, and, by maintaining an alert carriage and a youthful zest, camouflage ten calendar years from one's appearance. What our countenances and our actions may tell is largely motivated by and within us. We do what we most want to do. Just because our years may be many we need not appear old. With equal certainty the arrival of that physiological plateau that restrains us at forty may be postponed for a decade and by the exercise of disciplined control our physical reserve which thereafter declines with unpreventable certainty may nevertheless be reduced by a controllable minimal ratio. If then old age becomes a burden it may be of our own making.

From the tee a golfer's drive carries power and speed and his midiron shots are unrestrained in energy output. He may land in a sand trap or in the rough and be forced to sacrifice a stroke to regain advantage. When he has shortened the remaining distance to the green to a controllable yardage, power drives are ruinous. Greater caution and well directed control, therefore, are then essentials. The approach shot may win or lose his game. On the green he strives for accuracy and his quiet composure and deliberately restrained action consume little of his remaining reserve.

So in the game of life the drive of youth and the power of early adult endeavor, perhaps often interrupted by the hazards of illness or disease, bring us to the years of approach to senility. The effective control of vasospasticity through these years of a certainty will retard arteriofibrosis which progresses relentlessly under the stress of unrestrained modern living. If therefore during these approach years we may evolve a scheme of living that will protect the arteriolar structure of the body from spasm and excessive strain it would be a master protective stroke against premature senescence. The rules of the game

require controlled emotions, restrained ambitions, disciplined appetites, balanced physical activities, decentralization of effort and diversification of interest. The lost art of recreation and relaxation must be retrieved to supplant the sedentary practices and the restless tension of daily routine. A complete readjustment of values is necessary that we may make our latter years more comfortable and old age less a burden.

How to meet the requirements set up as criteria for living these approach years is a problem not so easy of solution. The pace of modern living is as difficult to adjust to a tranquil existence as to mix oil and water. In a narrowing world of self-centered endeavor working hard has become a religion and imprudent regard of health a virtue. The fear of poverty or the desire for recognition is the urge behind the neglect of self. We cannot, or we refuse to recognize the successful accomplishment of that which we may seek. Man's drive for material emoluments continues with a singularly sordid intensity that starves his soul, numbs his love of life, shrinks his capacity for laughter, and dulls his sense of humor. With no time for sports and little for play, his family often neglected through the false idea that otherwise he is serving them best, his perspective of life is distorted and his horizon of accomplishment narrowed.

The strategy of prolonging life, therefore, must be approached as a problem in self-control. Ambition for fame and wealth must be curbed to the contented enjoyment of the comforts of life. The self-centered drive for gain must surrender to serene relaxation and the contemplation of joy in companionship and friends. The threshold of desire must needs be lowered to a level consistent with the residual capacities of our vital processes to carry through. The individual with a hypertensive background above all should live with caution.

The two decades from age forty may be regarded as the approach years for shortly thereafter senescence is established. During that period one must become consciously expectant of inevitable old age. Preoccupation with problems of finance and the urge for attainment of ambitions need the damper of a more methodical life of regulated habits and budgeted time. It is not the industry we need to take out of life but its hurry and speed. There should be a selfish appeal for the conservation of one's physical and intellectual powers by the creation of a health reserve equal to, if not greater than, the financial reserve one craves for economic security in the same period. The extension of youthful habits, youthful ideas, and youthful enjoyment into these approach years can be achieved to the mitigation of the in-

firmities of old age, and the greater accomplishment of a race less inclined to decay.

Life expectancy of the American Negro at birth is forty-nine years compared to that of the white race of sixty-one, and yet on the basis of population ratio there are thirty-five times more Negroes than whites that reach the age of 100. The chief reason for this no doubt is in the Negro's attitude toward life, his contentment with the necessities thereof, and the lack of desire to seek fame and fortune.

Enslavement to profession or business is a life-shortening habit which any man can afford to discard. By diversifying interest and by the addition of variety to his activities, one may more readily adjust one's self to abrupt changes, disappointment or misfortune. One must learn to play and during that period of play to encourage mental relaxation and the resting of tired brain cells that have been driven to fatiguing irritability. An avocation or hobby may furnish opportunity for expression of one's self along different lines and broaden one's capacity for relaxation. Diversion from the sordid realities of life helps to stabilize one's mental and emotional control. The adoption of a spirit of *laissez faire* by the business man upon whose time there are great demands will not only postpone the development of senescence, but increase his efficiency, widen his range of interest and freshen his ability for accomplishment over an increased period of years.

Control of environment is no less important than direction of one's activities. Our eyes and ears carry irritations to the nervous system, that produce vasoconstriction, increase blood pressure levels, and stimulate arteriofibrosis. Glaring lights and, too frequently, the horrors and tension raising episodes of a poorly censored screen serve no valuable purpose. A multiplicity of noises jangles in our ears. The clicking of typewriter and telegraph, and the intrusive harshness of the telephone are considered essentials for business' sake. Loud speakers improperly regulated by insensible robots blare out at every place of assembly. When we would relax at lunch or converse over dinner we must resist confusion and the sound of music often misnamed or poorly rendered. The rumblings of industry are all about us, our streets are bedlam. Even the home is invaded by the hum of machinery and electrical appliances. The radio left on through-out the day to grind out its noisy clatter while the family attempt to carry on a normal home life is a detestable abomination. Our sleep must be rudely interrupted by a clanging alarm clock so that the vicious cycle may go on. There is little respite. The increasing roar of commerce in the air is now about to rob us of our remaining chance for undisturbed communion with nature.

We may achieve surprising results in staying the appearance of aging by erect posture and alert carriage. Daily diversion and recreational exercise is a routine to be sought by every man and woman of sedentary habits as an integral part of their living program. Too little exercise will just as surely undermine one's strength as over-fatigue and exertion will break it down. On the contrary, exercise under a hurried urge is poor compensation. Better a smoke or a highball in relaxation than a golf game against time. Occasion for rest is a necessary requirement of nature's recuperative machinery for the maintenance of optimism, mental alertness and physical fitness. To that end sleep is an essential which no one can long curtail and deprived of which none can long endure. Consequently, there should be a balance between exercise and rest, between work and recreation, between sleep and activity, as well as the proper attention to one's mental contentment and emotional gratification.

The average healthy man or woman needs little diet control beyond the appetite and a simple knowledge of basic nutritional needs. On the other hand, the neurotic and the dyspeptic are prone to take up silly fads and "isms" that not only disturb their nutritional balance, but add to their concern with the appearance of reactionary symptoms. Over-indulgence is no less a fault to be controlled. Gluttony and adiposity invite disease and encourage arteriosclerosis. A balanced diet of adequate protein, liberal carbohydrate and minimal fat that will maintain body weight at the accepted average standard is not difficult to achieve. Prolonged efficiency through added years comes best to him who by ordinary appearances may be somewhat underweight. In recent years vitamins have been publicized and greatly over-rated as needed accessories to the average diet. Nevertheless, they are essential to the maintenance of resilient response of nerve and muscle. As a dietary ingredient so often reduced to an inadequate minimum, calcium is an important element needed in the repair of devitalized tissues and protection of the vascular structure. According to Sherman, if adequate calcium is supplied through the period of the approach years senescence will be materially retarded.

Intemperance is one of the most widespread causes of premature aging. It is born of a total disregard of nature's principles of efficiency. The greatest of all man's intemperance is work, but controlled action in this regard is a virtue no less to be desired than to bridle the tendency to overindulge at exercise. During the approach years one's capacity for physical endurance is gradually lessened so that one's exercise program should be adjusted from year to year. As a rule after fifty strenuous physical effort not only is



undesirable, but often detrimental. Overeating adds unnecessary strain to the cardio-vascular system and is a life-shortening habit to be controlled. The effects of alcohol may be debatable, but it is damaging in intoxicating quantities and undesirable as a daily stimulant. On the contrary, it serves a purpose when irreversible metabolic changes have reduced glandular secretions below the requirements for adequate nutritional balance. There is little doubt that tobacco is a source of vasospasm to be avoided. The fact that some may live to old age and indulge it is no argument in its favor for it has been shown that more often it causes arteriolar spasm, raises blood pressure, and measurably reduces capillary circulation.

While we are learning to live we must not relax in our effort to combat disease for every acute infectious illness leaves its harmful effect and every focal infection its damaging influence. Pelvic disease in women and prostatic disease in men during the approach years are widespread and a serious menace to longevity but in no other phase of modern therapy is surgery quite so safely successful or gratifying in results.

An expectant interest in life will divert attention from the many somatic sensations that may arise by virtue of unpleasant emotions and the physician may do much to allay or aggravate the resulting apprehensions. That fear of disease and so-called "auto intoxication" and a false conception of "elimination" has weakened many a man and woman by purgation beyond reason there is no doubt. Their efforts to "keep the colon clean" cause discomforts which in turn create food phobias, lead to inadequate food intake, and result in needless years of nutritional semi-invalidism. Every one must watch for signs of cancer not to fear it but to fight it. They suffer and regret who fear and procrastinate.

Physicians everywhere are pleading for the annual health examination after fifty. It affords an opportunity for the early detection, correction or control of certain diseases and life shortening processes, the mitigation of which justifies the effort. Metabolic disorders, especially thyroid and ovarian disease, are easy of detection and responsive to treatment. One can uncover incipient diabetes and add worth while years of living. Cancer may be found while it is still removable and its victim saved for a useful citizenship. Cardiac and pulmonary disease, arterial hypertension and renal disease are easy of recognition while they are yet reasonably responsive to control. Focal infections and various diseased organs that endanger health and life may be found and removed. Adiposity that already has the intimate acquaintance of its victim may be evaluated and the opportunity

afforded for much needed advice regarding habits and health requirements.

But in a larger sense the periodic health examination is inadequate and of itself does not solve the problem. It cannot protect from the many fatal accidents of our mechanized age nor save one victim from pneumonia. It is powerless to prevent the alarming increase in carbon monoxide poisoning which yearly claims an increasing number of victims among those whose arteries are hardening and narrowing. It may discover, but cannot alter the hidden changes in the vascular system that make no announcement of their presence till obvious organic change or functional impairment of some organ is manifest. Disease may be detected, but degenerative and involutional processes go on uncontrolled and uncontrollable by virtue of any examination we may make. When by examination we can discover evidences of functional impairment or structural change in the heart, kidneys or other organs, already there has been a loss of at least a part of that reserve which should have been conserved for the future. At fifty the fatigue index is increased and the recuperative index lowered and already in most of us established irreversible involutional changes that so easily may gain momentum. Furthermore, if caution is worth while after these changes are discernible, how much more might it accomplish if applied before they arrive.

As a companion move therefore, to that for the annual health examination I propose organization of the American Guild for the Conservation of Physical Energy, with the slogan, "Slow down for a happy landing." It should be required of those who join that they be in the fifth decade and twenty-year certificates of membership be issued renewable to those who show aptitude at learning to live. The doctrine of self-preservation after forty must be carried to the individual for it is a responsibility of every man to himself, and as a member thereof, to society in general. Such an organization to be financed through a modest membership fee, with proper professional direction may become a force for great good in the social and economic life of the nation. So not only may life itself be lengthened but old age made more pleasant and more profitable to one's self and less a burden to one's family, his friends and the state.

After all it should be our purpose not so much to make a man live long as to make his life more livable. The doctrine of diversification of interest and decentralization of effort does not in the least require the shelving of one's talents for professional or business accomplishments, nor does it mean the aban-

donment of one's main purpose to achieve a successful career. But rather does it mean a broadening of that purpose crowned by arrival at the years of retirement to receive the reward of approbation in a task well done. At the same time it serves to keep us alert to the fascination of the world about us and yields a certain satisfaction of which slavery to ambition and selfish endeavor would rob us. We may accomplish the prevention of premature decline, and yet the approach years be full of useful living and contentment rather than a sordid existence. It should be our aim, therefore, to be dispassionate and self-possessed; to give enough time daily for the restoration of our physical, mental and emotional reserve; to not work too hard nor to eat too much; to avoid irregular hours, not only for sleep and recreation, but for work as well; to prevent distracting interruptions and to modify irritating environments that harass and perturb one's peace of mind. To accomplish these and to cultivate the lost art of quiet relaxation will do much to bring the comforts of living to old age in the joy of a long life well spent. So may we come to the end of our days with assurance and approach the end "as one who wraps the drapery of his couch about him and lies down to pleasant dreams."

#### REFERENCES

1. Bram, I.: Youth May Remain at Forty, Depending on Your Thyroid. *M. Rec.*, 141:196, Feb. 20, 1935.
2. Brunie, L. J.: Geriatrics. *California and West. Med.*, Vol. 49, No. 5, Nov. 1938.
3. Burgess, G.: Accent on Youth. *Hearst's International-Cosmopolitan*, 1937.
4. Editorial: Geriatrics. *Inter. M. Digest*, 34:181, March 1939.
5. Faught, F. A.: Characteristic Findings After Forty Years of Age. *M. Rec.*, 140:343, Oct. 3, 1934.
6. Horn, Will S.: Geriatrics as a Modern Specialty. *Texas State J. Med.*, 33:448, Oct. 1937.
7. Hornstine, N. H.: Arteriosclerosis. *The Stepping Stone to Senility. Am. Med.*, 37:158, March 1931.
8. Knighton, J. E.: The Failing Heart of Middle Life. *New Orleans Med. and Surg. J.*, 86:783, June 1934.
9. Marston, W. M.: Try Everything Once. *The Rotarian*, April 1939.
10. Piersol, G. M., and Bortz, E. L.: The Aging Process: A Medical-Social Problem. *Ann. Int. Med.*, 12:964, Jan. 1939.
11. Ruhberg, G. N.: The Presenium. *Minnesota Med.*, 17:182, April 1934.

## THE TREATMENT OF PAROXYSMAL TACHYCARDIA WITH APOMORPHINE

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Paroxysmal tachycardia is an abrupt, suddenly developing marked increase in heart rate up to around 180 to 220 beats per minute, the pulse is rapid, thready and is often preceded with or followed by one or more premature beats of which the patient is aware. The patient is pale gray or mildly

cyanosed, has a sense of depression and anxiety often to a near hysteria and during earlier attacks usually has a fear of death. They are weak, perspire, and often in a shocked state.

In treating this condition something should be done to slow the heart rate and since the vagi nerves inhibit the heart a drug which stimulates this nerve or the vagus center should have the desired effect. The action of the vagus is mostly on the auricles and particularly the sino-auricular node; thus, vagus stimulation should inhibit the impulse which starts at this node and should therefore slow the heart rate.

Stimulation of the distal end of the cut vagus in animals slows the heart and if of sufficient intensity stops it altogether. This was first shown by Edward Weber and E. H. Weber in 1845. It has also been shown that the inhibitory fibers of the vagus effects the rate and force of the contractions and also the conductivity or the propagation of the excitation wave. Stimulation of the proximal end of one vagus or of sensory nerves causes a slowing of the heart through the vagi centers and down the unsevered vagus of the opposite side.

The cardio-inhibitory center keeps the brakes on the heart constantly and when both vagi are severed the heart beats rapidly on account of the sympathetic nerve as well as the loss of the inhibitory effect of the vagus.

Just how the vagus inhibits is not known but it has an effect similar to potassium salts and Howell has shown by using Lock's solution on a dog's heart that stimulation of this nerve causes an increase in potassium in this solution. He has also shown that inhibitory stimulation is not injurious to the heart but under certain circumstances an improvement may be noticed in the rate or force of beat or in the conductivity.

Atropine administered to dog or man causes a quickening of the heart rate the same as if the vagus was cut. Muscarine and pilocarpine cause a slowing of the heart and finally cessation of beat. Goeltz in 1863 showed that the inhibitory fibers might be stimulated reflexly by action upon sensory nerves or surfaces. He causes the heart to come to a standstill by rapid taps on the abdomen of a frog and it is known that the heart may be slowed by suddenly filling the stomach.

Apomorphine hydrochloride has a marked effect on the viscera, particularly the stomach, probably by way of the vagi and it was reasoned that therefore it might have an inhibiting effect upon the heart. Its use has proven successful in several instances in which I have administered it during an attack of paroxysmal tachycardia.

After searching through the literature I can find but one reference of the use of this drug in this



disease and that was one case reported by Weiss in *Medizinische Klinik*, October 30, 1931.

Hatcher and Eggeston as well as Thumas have outlined the vomiting center in the region near the thalamus and apomorphine probably effects the vagi centers on account of the proximity of the two centers and they in turn slow up the heart. However the whole reflex mechanism of vomiting, with its respiratory effect, has not been worked out in detail.

#### CASE I

Mrs. W. R., a woman of thirty-three, had recurrent attacks of paroxysmal tachycardia at six or twelve month intervals. I saw her once and gave her morphine gr.  $\frac{1}{4}$  which quieted her but it was about six hours before her heart suddenly returned to a normal rate. She was very tired the next day. I saw this woman in another attack about six months later and administered 1/20 grain of apomorphine hypodermically. She vomited a little three times and in twenty-five minutes her pulse rate was normal and she felt good excepting for a slight drowsiness.

#### CASE II

Mrs. H. M., a woman of sixty, had attacks of paroxysmal tachycardia about ten years ago but had none since until June, 1937, when about the house she suddenly developed a rapid pulse and went to bed. After two hours she was given apomorphine gr. 1/24 hypodermically and very shortly following a short period of nausea and vomiting her heart rate was normal. This has been repeated in this individual three times since with the same results.

#### CASE III

Mrs. K. N., aged twenty-seven, a woman in good health except she had one "heart attack" previously, suddenly became short of breath, cyanotic and at times hysterical with a very rapid heart which she could feel "running away with itself." I had seen her previous attack and could slow the rate temporarily with orbital and vagi pressure but as soon as the pressure was removed the rapidity returned. My call did her but little good except to reassure her and to quiet her anxiety with morphine. It was four hours before her heart suddenly slowed to normal. The second time I saw her I administered 1/24 grain apomorphine hypodermically and in about twenty minutes her heart rate was normal.

#### CASE IV

Mrs. J., a woman of thirty-six, had an attack of paroxysmal tachycardia which lasted for two hours before she received a hypodermic of 1/30 grain of apomorphine. After nausea and very little vomiting her heart rate suddenly became normal.

#### CONCLUSION

In my limited experience apomorphine in small doses will stop an attack of paroxysmal tachycardia, probably by its effect through the vagi. It does not take a large dose of the drug. I have had no failure.

### THE TREATMENT OF INTRACTABLE PAIN\*

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Intractable pain has tortured the human race for centuries, and taxed to the utmost the efforts of medical science. The opium derivatives have been invaluable in affording relief, but even they have not sufficed in some conditions in near-lethal doses. Since the Listerian era, particularly, the medical profession has looked to surgery for relief of intractable pain. And since the advent of neuro-surgery, more direct attacks upon pain conduction pathways have been undertaken. It is the purpose of this paper to discuss briefly some of the forms of intractable pain which have been successfully combated by neuro-surgical procedures.

Headache, with its multiple etiological factors, has offered ample opportunities for surgical intervention. The treatment of intracranial masses needs only be mentioned for the profession is well aware of the methods employed in attacking brain tumors, brain abscesses, and intracranial granulomata. Likewise, the treatment of headache resulting from trauma and due to intracranial hemorrhage (subdural and extradural hematomas) has been standardized and accepted. Rather recently, the relief of headache in the so-called post-traumatic syndrome has been effected in some patients by encephalography or by direct insufflation of the subdural space with air<sup>1</sup>. And yet, a more common type of headache with which one is so frequently confronted, is extremely difficult to control in some cases. This is migraine, and fortunately has lately been relieved in many instances by the use of ergotamine tartrate, but some severe cases have been refractory, and surgical intervention has been sought for them. The mechanism of pain has been considered as that of irritation of dural nerve endings, and since much of the nerve supply of the dura over each cerebral hemisphere is from a small branch of the mandibular division of the trigeminal, interruption of that nerve seemed worthy of trial. This nerve, the nervus spinosus, accompanies the middle meningeal artery and its branches closely, hence ligation and section of this

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vessel with its accompanying nerve were carried out<sup>2,3</sup>. There have been numerous reports from different clinics of the successful relief of migraine by this relatively simple procedure. More recently, a detailed study of the nerve supply to the dura by McNaughton<sup>4</sup> has suggested that the entire trigeminal nerve supply is carried in its posterior root along with the ophthalmic fibers. Penfield<sup>5</sup> reported several years ago the relief of intense unilateral headache in two patients by section of the ophthalmic fibers in the posterior root of the fifth cranial nerve. So, one may offer a patient with severe migraine possible relief through surgery.

Trigeminal neuralgia or tic douloureux is well-recognized as one of the severest pains to which man is heir. The symptomatology of this disease rarely is unrecognized, and it is regrettable that too often the patient so afflicted loses most of his teeth. The pain may be relieved temporarily by alcohol injection or avulsion of the peripheral branches of the trigeminal nerve, or permanently by partial or complete section of the posterior root of this nerve. A preliminary injection is often advisable, as it permits the patient to accustom himself to the resulting numbness and possible paresthesias, the numbness, of course, being permanent with the posterior root section. A small percentage of patients who undergo the radical procedure develop a facial paresis, but this is practically always transient. Patients who have an injection or avulsion of a peripheral branch may expect the return of pain in from three to eighteen months, but when the posterior root is sectioned, the trigeminal neuralgia is never experienced again in the region supplied by the sectioned nerve.

More recently, a similarly severe pain has been recognized as being transmitted through the glossopharyngeal or ninth cranial nerve. This pain is felt in the larynx, side of the pharynx, Eustachian tube or deep in the ear, and is as disabling as tic douloureux. Relief is afforded by intracranial section of the glossopharyngeal nerve.

A type of pain in the upper extremity that is often incapacitating is referred to by the term "scalenus anticus syndrome." The pain is usually radiating in character, extending from the base of the neck into the shoulder and upper arm on the same side. The radiation often extends along the ulnar side of the forearm and hand. Sometimes, the patient will say that the pain is of a diffuse, burning character in the entire upper extremity. There may be marked tenderness in the medial third of the supra-clavicular fossa, and radiation of pain from even moderate pressure in this region. In some patients the radial pulse fades considerably on the involved side when

both arms are elevated over the head.

The pain is produced by pressure on a part of the brachial plexus by a fibrous band extending from a long cervical transverse process or a short cervical rib to the first rib, or by an abnormal (thickened) scalenus anticus muscle. Section of either of these structures (fibrous band or scalenus anticus muscle) will usually result in relief of the pain<sup>6</sup>. Of course, the same symptoms may be due to a cervical rib, and section of it may be indicated.

Patients having severe angina pectoris have been subjected to various surgical procedures, and from several of these, relief has been obtained. Paravertebral injection, i.e., injection of the rami communicantes of the upper dorsal sympathetic ganglia with novocain and alcohol, has been successful on many occasions<sup>7</sup>, but such a procedure carries some danger with it and necessitates accurate placing of the needles. The pain has been relieved by removal of the middle, inferior cervical and first thoracic ganglion of the left sympathetic chain<sup>8</sup>. Similar relief has been reported following the excision of the superior cervical ganglion and also by sectioning the sympathetic trunk and the superior cardiac nerve below the superior cervical ganglion<sup>9</sup>. Laminectomy with bilateral section of the upper six dorsal posterior roots has stopped entirely attacks of anginal pain<sup>10</sup>. The various sites for surgical attack in this condition are due to the varied opinions regarding the pathways for transmission of visceral pain. However, it is sufficient to state that many cases of angina pectoris may be relieved of pain by surgical procedures.

Post-herpetic pain, the pain of tabes dorsalis, and some visceral pain may be relieved by posterior spinal root section. All cases do not respond to such a procedure, however, in the first two conditions because in all probability there is some inflammatory reaction cephalad to the point of section. Some individuals with post-herpetic and with tabetic pain have also been afforded marked relief by the sub-arachnoid injection of alcohol.

Pain from pressure upon the spinal cord or its roots is usually open to approach by a laminectomy. If a removable mass such as an extra-medullary neoplasm, a herniated nucleus pulposus, or a hypertrophied ligamentum flavum is discovered, removal of the same may result in cessation of the pain. If the mass is not removable, section of the posterior roots in the involved region may give the patient the desired freedom from pain.

A field which is broad and which offers a plentiful supply of clinical material is that of the pain associated with advanced malignancies. The relief of pain from malignancies involving the pelvis is more



easily provided than of pain from malignancies higher in the body. The use of subarachnoid injections of alcohol was broadcast a few years ago, without sufficient emphasis being placed on its cautious application, and as a result, considerable damage was wrought and the procedure brought somewhat into ill repute by its injudicious use. However, in patients with pain in the lower abdomen and pelvis, caused by malignancy or some inoperable lesion, the careful injection of a few minims of ninety-five per cent or absolute alcohol into the subarachnoid space at levels corresponding with the distribution of pain, the patient having been properly postured before the injection is started, will very frequently give early and often marked relief of pain. About one-half of the patients so treated are troubled by a temporary inability to void. This type of lesion may also be treated by posterior spinal root section if the patient's condition will permit a laminectomy. If the lesion is high enough so that an injection has to be done above the cauda, that is, about the cord itself, one may damage the cord, and injections above the cauda are therefore not generally used unless the patient is in a late stage of malignancy so that possible loss of cord function is no great factor. In these lesions again, posterior spinal root section may be employed. A still more radical procedure has been devised to combat diffuse pain from malignancies, and it is known as cordotomy, or section of pain conduction pathways in the spinal cord. This procedure is usually a bilateral one, and a V-shaped incision is made into the cord between the dentate ligament and the point of exit of the anterior root. For the relief of visceral pain, recent workers have shown that the point of the V must extend to a sufficient depth to include a portion of the gray matter. Obviously, a paraplegia may result, but as mentioned above, this may be a negligible factor. Control of pain in the arms by cordotomy is difficult, since a posterior spinal root section of sufficient extent to alleviate the pain leaves the individual with useless upper limbs. Putnam<sup>11</sup> has proposed sectioning the anterior commissure and has carried out such a procedure for such pain. One patient so treated was free of pain for her remaining two months of life.

In summary, one may say that there are available to patients suffering from intractable pain, surgical procedures, many of them standardized, which will permit them to be comfortable, to enjoy life and relieve them of the stupor produced by massive doses of opiates.

#### BIBLIOGRAPHY

1. Penfield, Wilder, and Norcross, Nathan C. Subdural Traction and Posttraumatic Headache—*Arch. of Neurol. & Psychiat.* 36: 75-94 (July) 1936.

2. Dickerson, D. G. Surgical Relief of the Headache of Migraine—*J. Nerv. & Mental Dis.* 77: 42 (Jan.) 1933.
3. Oldberg, E. Surgical Treatment of Migraine—*Arch. of Neurol. & Psychiat.* 37: 199 (Jan.) 1937.
4. McNaughton, Francis L. The Innervation of the Intracranial Blood Vessels and Dural Sinuses. The Proceedings of the Association for Research in Nervous and Mental Disease, Vol. XVIII. (Nov.) 1937.
5. Penfield, Wilder. Operative Treatment of Migraine—*Trans. of Am. Acad. of Ophthalm. and Otolaryngol.* 1932.
6. Adson, A. W., and Coffey, J. R.—Cervical Rib: A Method of Anterior Approach for Relief of Symptoms by Division of the Scalenus Anticus. *Trans. West. Surg. Assoc.* 36: 315, 1926.
7. White, J. C. and White, P. D. Angina Pectoris: Treatment with Para-Vertebral Alcohol Injections—*J. Am. Med. Assoc.* 90: 1099, 1928.
8. Jonnesco, T. Traitement Chirurgical de l'angine de pectore par la resection du sympathique cervico-thoracique. *Presse Med.* 29: 193, 1921.
9. Coffey, W. B., and Brown, P. K.—The Surgical Treatment of Angina Pectoris. *Arch. Int. Med.* 31: 200, 1923.
10. Davis, Loyal. *Neurological Surgery.* Lea & Febiger, 1936—P. 332.
11. Putnam, T. J. Myelotomy of the Commissure—*Arch. of Neurol. and Psychiat.* 32: 1189, 1934.

## SINUS TROUBLE AND IT'S NON-OPERATIVE TREATMENT\*

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The title of this paper was deliberately chosen by the writer because of the indefiniteness of the term. It seemed peculiarly fitting. For some years he has been amused by the laxity of terminology on the part of some physicians, to say nothing of the general public. Muscle trouble, bowel trouble, female trouble are now joined by sinus trouble in the galaxy of indefinite diagnostic terms used loosely by the profession. Sinus trouble is not a new disease but a new fad in diseases. The profession has permitted (if not actually urged) the public to stress indefinite nasal difficulty to the extent that a recent popular magazine carried an article on the "Sinus Racket."

Medical literature is replete with articles on sinusitis. Within the past year the following articles have appeared:

- Sinus and focal infection.
- Sinus and eye conditions.
- Sinus and mental disorders.
- Sinusitis and infectious disease.
- Sinus and kidney trouble.
- Sinusitis and allergy.
- Sinusitis and arthritis.
- And a host of others.

The physician who attempts to limit his practice to the special field of Oto-Rhino-Laryngology is not alone to blame. The general practitioner, seeing this supposedly lucrative field of sinus treatments, has eagerly climbed on the band wagon and rare indeed

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is the office wherein the sinus sufferer cannot secure (or be forced to accept) nose drops or argyrol packs; light treatments or diathermy; and possibly the whole works.

We might well ask: What is the objective of all this effort? From what symptoms do the patients seek relief? Indeed there are a great many symptoms, but primarily in actual sinus disease they want relief from pain and they desire cessation of discharge. To a less extent they often want freer breathing space in which case sinusitis is usually not present. The patient may also want help in solving some systemic problem that might be influenced by sinusitis.

The pain is quite often in the region of the sinus involved but may be referred to other parts of the head. This is especially true in posterior ethmoid and sphenoid involvement. The deep-seated pain here often radiates to the vertex or occiput. If the pain is due to accumulated secretions, the history, temperature curve, rhinologic examinations (more than one often being necessary), transillumination, and x-ray usually suffice to locate the offending sinus.

The patient may, however, experience similar severe and definite pain in the so-called vacuum sinus headache as when pus is present. The treatment is very different.

The problem of nasal discharge is most disturbing and trying. Many people have an excess mucous production at intermittent intervals; or else we are forced to admit that everyone in Kansas has some sinus involvement. Not every case of post-nasal mucous secretion is sinusitis. At least it cannot be so diagnosed by any procedure known at present. Often it is due to an area where two mucous surfaces are in constant contact; as a septum deviated in the posterior portion, or enlarged posterior ends of the inferior turbinate bones. Careful investigation and painstaking search is usually necessary to locate the source of post-nasal drip and finally the search may be unavailing. I think the importance of this type discharge to systemic disturbances has been greatly over-estimated. There seems to be considerable doubt whether infection in a surface membrane like the lining of a sinus, is any more prone to produce systemic infection, than is the infection of the surface of the membrane lining the nasal cavity.

The treatment of acute sinusitis is distinctly different from that of the chronic type. A variable amount of sinusitis is present in every acute cold in the head. Quite commonly it is little more than part of the cold with which it appears and, like the cold, tends to spontaneous recovery. The treatment of acute sinusitis consists of rest in bed in a room with plenty of moisture in the air, liquid diet, proper

elimination and suitable medication for fever and pain, the latter occasionally necessitating morphine. Infra-red heat may be applied over the face if it assists in relieving pain. Some mild vaso-constricting drug may be used sparingly in the nose in the form of drops or spray. I have seen numerous acute conditions prolonged and made worse by too frequent use of ephedrine drops. Recent work has shown that many of the medications widely used are actually destructive to the nasal epithelium and favor increased infection by impairing ciliary activity, breaking the first lines of defense. There is one all-important don't. Do not permit any intra-nasal surgery during the acute stage. All instrumentation should be avoided and even rough handling of cotton tipped applicators so as to bruise the acutely inflamed mucosa is contraindicated. At the University of Michigan Hospital in a long series of sinus cases among students there were definitely less complications in those cases wherein no intra-nasal manipulations were attempted during the acute stage.

Much more can be done for and to the patient in the sub-acute and chronic stage of sinusitis. Irrigation of the nasal cavity is a valuable procedure. The solution should be isotonic with blood serum and at body temperature. Normal salt solution is probably the best irrigating fluid although some men prefer one and one-half per cent solution of calcium chloride because of the beneficial action of the drug on oedematous tissue. Precautions should be taken against permitting the fluid to enter the middle ear or being forced into uninvolved sinus areas. This is done by asking the patient to incline the head forward and to breathe evenly thru the open mouth while the solution is allowed to flow into one nostril and out the other. The solution container should not be more than one foot above the patient's head. The patient should not blow the nose for at least fifteen minutes after the irrigation.

Suction is of distinct benefit in ethmoid and frontal infection. The suction should be mild; never over five inches; and applied intermittently only a few times. Injudicious use of too high negative pressure causes bleeding, congestion in the mucosa, and pain, and makes the patient worse instead of better. A particularly useful apparatus is one whereby normal salt solution is allowed to flow into one nostril while mild suction is applied to the other nostril.

The displacement method of sinus treatment is especially valuable in those cases where the viscosity of the mucopurulent material is such that it escapes from the sinus with difficulty, tending to adhere to the walls. Also when a swollen mucosa partially



occludes the opening of the sinus. The best solutions to use in this treatment are one-fourth to three-fourths per cent ephedrine or one-fourth per cent neo-synephrin hydrochloride. The solutions are made to enter the sinus cavity by displacing the air in the sinus while the patient's head is in such a position that the offending sinus is at the lowest point of the dependent head. For instance, to treat the posterior ethmoid and sphenoid sinuses the patient would lie on his back with head over the edge of the table so that a line thru the external auditory meatus and the chin would be vertical. After instilling two-four cc. of the solution in the nose while the patient breathes thru the open mouth, gentle suction is applied to one nostril while the other nostril is closed by the finger. During this suction period, the patient closes the naso-pharynx by saying K, K, K. Intermittent suction to allow the fluid to trickle into the sinus is better than continuous suction. Another two-four cc. are instilled and suction applied a second time. After thorough cleansing of the nasal cavity and a wait of fifteen minutes, this displacement treatment often assists in securing good drainage and aeration. This type procedure is of especial value in the broncho-sinusitis type of infection.

Fracture of the middle turbinate toward the septum is a procedure that has been of great benefit in treatment of ethmoid infections. In the subacute condition the secretion is likely to be too thick and tenacious to escape readily from the ethmoid area, especially in those cases wherein the middle turbinate lies very close to the lateral wall of the nose. Under cocain anesthesia the middle turbinate bone is fractured toward the septum so as to permit a good view of the condition of the tissues underneath. This procedure alone will occasionally suffice to secure adequate drainage with mild suction. It also favors the application of suitable agents to the infected area.

The maxillary sinus can usually be irrigated thru the natural opening if such an action is necessary. It has been some time since the writer has found it necessary to puncture the maxillary sinus thru the bone in the inferior meatus. The above-mentioned fracture of the middle turbinate is occasionally necessary and often desirable if repeated antrum irrigations are contemplated. I think too many antra are irrigated and I think many antra are irrigated too many times.

All agencies which raise the patient's resistance and tend to restore him to natural physical well-being have a place in the treatment of sinusitis. Many persons know what agencies or actions predispose them to colds. Strict attention to proper

safeguards constitute the best treatment for many of these.

The indiscriminate use of vitamin therapy is not commendable. Too often vitamins are suggested in the same way as the old-fashioned shot-gun prescription was used; hoping one of the alphabet will score a hit.

The limited use of diathermy in the hands of the writer has proven disappointing from any standpoint other than palliative. The use of ultra-violet therapy has been of some assistance in children and with some adults who are constantly indoors. The use of vaccines has also been disappointing.

From the foregoing it is evident I am definitely inclined to conservatism in sinus treatment. My percentage of failures in sinus surgery has not been more than that of the average operator. Also situated as we are here upon transcontinental highways patients are occasionally seen who have been operated upon by master rhinologic surgeons. Many of these patients still have most of the symptoms for which they sought relief in surgery and a few have some new ones added since their surgical adventure. There are conditions in which surgical interference is not only indicated but imperative, but the surgical approach to the problem has been over stressed.

Some of our erstwhile friends and colleagues, the general practitioners, have such a decided antipathy to sinus surgery that they oppose ANY sinus operation for their patients, regardless of symptoms or condition. I am not prepared to accept that view but I attempt cures by radical surgery less and less often.

In closing I offer a plea to the general practitioner to study these cases along with the specialist. Definite and precise diagnosis is as necessary in sinusitis as in any branch of medicine or surgery. The information secured prior to a diagnosis too often consists of what may be learned by a few minutes inspection of the nose and throat; the use of the transillumination lamp; and the taking of x-ray pictures in one to three exposures. To paraphrase a suggestion from a recent pamphlet, we should study the x-ray less and the patient more.

Many of the patients come to us complaining of more or less indefinite symptoms of some upper respiratory tract disorder. They have low pulse, low respiration, low temperature, low metabolism, pale mucus membrane, occasionally with stringy mucus in the nose. Body metabolism is certainly at fault in many of these cases and the changes in systemic functioning are making themselves manifest in the nasal mucosa.

Also too many patients subjected to numerous  
(Continued on Page 392)

## PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

In another part of this issue will be found a call for a meeting of the chairman of each committee of the State Society. The meeting will be held in Topeka early in the afternoon of Sunday, September 10. We are hoping for a full attendance of the committee chairmen. To our letters announcing the appointment of the various committee members we received very encouraging replies. Two of the committees have already met and have outlined their work for the coming year in a very excellent fashion. Thus, we are lead to believe that our year's work is starting off with enthusiasm and we have every reason to believe that this will be a good year for The Kansas Medical Society.

May we ask of each and every one a ready response to each task. May we ask that each member have confidence that the Society will try in every way possible to serve the best interest of each and every member. May we ask that everyone feel free to communicate either to his councilor or to the officers of the State Society his wish as well as his suggestions looking toward the success of this year's program. In return for these requests we want to pledge to every member the willingness of the present officers, councilors included, to serve to our fullest extent the interest of the Society. Let us again urge that each member feel free to express himself either by word of mouth or by letter on any problem in which the opinion of the Society can serve the interest of the profession.

Yours very truly,

C. C. Nesselrode, M.D.



# EDITORIAL

## THE ENDOCRINE PROBLEM

One of the problems that comes to the attention of all physicians practicing medicine is the diagnosis and treatment of all conditions that have an endocrine etiology. This is a far reaching field and the manifestations of such conditions present a myriad of symptoms and physical findings, many of which are fleeting and evanescent. One must be on a constant look out for these signs and symptoms and interpret them correctly.

From time's beginning, the human race has been cognizant of the role of the sex glands in an individuals makeup and as a result of this there has arisen among those who are not sincere in their desire to improve the health of the human race, a system of quackery into which too many have become ensnared to the financial profit of the ensnarer. This is not only true of those charlatans who advertise the implantations of sex glands but also those firms that manufacture shot-gun endocrine preparations of doubtful value and advertise them to the profession with blatant claims for their efficacy.

It might be well here to briefly review the preparations made from endocrine glands or their secretions which have been proven beneficial to a degree that would warrant their use in medicine. The oldest and still one of the most useful of these preparations is thyroid extract. This is available in three forms, namely, dessicated thyroid substance, thyroid extract and in the pure crystalline form thyroxine. These preparations are standardized according to their iodine content, any one of which may be administered under a physicians observation where there is a deficiency of the thyroid gland.

Insulin was the next preparation to be perfected and improved. We are all aware of the important place that insulin plays in the health and happiness of those individuals suffering from diabetes. Another one of the metabolic hormones which has been developed and utilized in the past year or so is the extract of the cortex of the adrenal gland. This is indicated in the asthenias of adreno-cortical deficiency.

In the past ten years we have seen the isolation

and development of the sex hormones. They have been repeatedly improved and concentrated. One of these is the female sex hormone which is the secretion of the developing follicle of the ovary. It is available from several commercial drug firms under as many names, in a pure or mixed form for either oral or hypodermic administration. Another is the extract of pregnant mare serum which contains the two active principles of the anterior pituitary which have the ability in the proper concentration of stimulating the follicle of the ovary, if it is capable of being stimulated, to produce a mature egg cell, cause the rupture of the cell with the extrusion of the ovum, and then to stimulate the ruptured follicle to produce the second secretion of the ovary which is known as progesterin. We also have a physiologically active commercial preparation of progesterin.

In the process of the development of the potent extracts, we have run the gamut of many other extracts and preparations of slight or doubtful potency which should be used advisedly and with great caution considering their cost to the patient for benefits received, but above all considering their contraindications. These substances include the anterior pituitary like hormones or the extracts of pregnant urine, parathyroid extracts, and varying pituitary extracts for weight control and pituitary deficiency.

What are the indications for the utilization of the varying potent glandular preparations? What are the contraindications? They are briefly listed in the following paragraphs giving some of the common symptoms and laboratory tests indicated.

Thyroid is given for cretinism, myxedema and milder deficiencies of the thyroid gland. The degree of deficiency is determined by the basal metabolic rate and blood cholesterol determinations. The subjective symptoms leading to a clinical diagnosis of thyroid deficiency are dry skin and hair, variations from normal of the pulse rate and blood pressure readings, fatiguability, nervousness and disturbances in menstrual rhythm. Obesity is not an important symptom in thyroid deficiency. The dose of thyroid is determined by the return of the basal metabolic rate to normal in correlation with the improvement of the patients symptoms. Thyroid feedings are contraindicated in weight reduction for obesity un-

less there is a thyroid deficiency as indicated by a low metabolic rate.

Pituitrin, which is the extract of the posterior lobe of the pituitary gland is administered in conditions where it is desirable to stimulate contractions in certain smooth muscle groups in the body. It is used to stimulate the postpartum uterus to contract in the prevention and control of postpartum hemorrhage. It is contraindicated in the prepartum stages of labor. It is administered as a preventive or therapeutic agent in the control of post-operative distention. It is occasionally used as a stimulant in pneumonia and other conditions. Pituitrin is contraindicated in instances of elevated blood pressure, and intestinal obstruction.

The female sex hormone is indicated in conditions associated with the menopause, either natural or artificial. This is its main indication. It may be used in selected cases of vaginitis in children. It is frequently indicated in senile vaginitis and chronic cystic mastitis. The symptoms of the menopause are vasomotor disturbances usually known as hot flashes, depression, irritability, sleeplessness, sore breasts, paraesthesias, vaginitis and vulvitis that are not infectious in etiology. The dose of the female sex hormone is just that amount which is sufficient to control the patient's symptoms, this varying from a thousand units a day up to possible twenty-five thousand units a day. The female sex hormone is contraindicated in teen age girls and in young women where it is desirable to retain the reproductive function.

Extracts of pregnant mare serum is indicated in disturbances of menstruation of young women in which it is important to retain the reproductive function. Such extracts are used for excessive menstruation, marked menstrual irregularities, failure of ovulation, sterility and absence of menstruation in young women with no congenital or pathological abnormality. Present commercial extracts should only be used during the menstrual flow and not to exceed the first fourteen days of the menstrual cycle, counting from the first day of the period. They are contraindicated in the last two weeks of the menstrual cycle.

Progestin is indicated in threatened abortion. It may be of some value in selected cases of painful menstruation.

Adrenal cortex preparations are indicated in the asthenias that are produced by deficiencies of the adrenal cortex. The diagnosis of such deficiencies is made by studies of the blood serum sodium and potassium under certain conditions as outlined in the Wilder test. Adrenal cortex preparations are absolutely contraindicated in asthenias that are not of cortical origin.

Most of the potent glandular extracts have been listed above. There are many preparations on the market of the shot-gun variety that have little or no therapeutic value and no therapeutic application because they can be replaced by potent preparations which give positive results.

So what can we expect in the treatment of endocrine patients? First we must make a correct diagnosis. This is done by detailed histories, careful physical examinations, proper laboratory procedures and a correct correlation and interpretation of the results. Second, we must choose the preparation to be used in the deficiency. The selected preparation should be potent and standardized. The effect of the therapeutic agent must be closely observed, permitting a sufficient period of time between observations for the agent to become effective. Your results will be as follows; many endocrine patients cannot be improved by glandular therapy because there is no potent therapeutic agent for their particular condition; many will be completely relieved of symptoms and after a sufficient period of time the medication may be discontinued; and many will be relieved as long as they follow your instructions and faithfully continue with treatment.

L. R. P.

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## SENATOR TAFT SPEAKS OUT

The following is an abstract from the speech made by Senator Robert A. Taft of Ohio at the laying of the corner-stone of the Doctor's Hospital, Washington, D. C.

"There is hardly a field in which there has been more sensational and continuous improvement than that of medicine in the United States. That improvement has been due to the brilliant, unselfish and industrious work of thousands of physicians. It is not their fault that incomes are unequally distributed, and that efforts by local government to cover the



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No, because they are sensible people, Sally's parents will do neither of these things. They will look upon her emotional upsets chiefly as evidence

that something is *physically* wrong—that bodily readjustments are sending up danger signals that should be heeded promptly. And realizing this, they will take her to the family doctor.

There is every reason why a girl entering her teens should be given regular check ups by a physician. Important changes are taking place which frequently throw the body's delicately-adjusted glandular system out of balance.

This is often a cause of headaches, weight disturbances, and emotional outbursts. During adolescence, heart and lungs need watching. At this time, tuberculosis, anemia, and appendicitis become greater hazards.

The doctor can not only help remedy "the troubles of the teens," but if the child is brought to him early, he can often forestall them. He can correct any organic weakness.

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entire field of health have been restricted by lack of resources. But now I hope they will take an active interest in seeing that the unequalled medical service received by most Americans is extended to the entire population. Their own interest and participation in the program will make it certain that it is not dominated by half-baked theorists, or by those who believe in totalitarian state, directing the lives and caring for the health of all its citizens through the mechanical and usually careless action of government bureaus. I believe a federal aid program can be worked out. I believe it can be much simpler and much more economical, and much more likely to preserve the essential independence of the doctors than the present Wagner bill. I believe it can be worked out with the assistance and cooperation of the doctors themselves."

### SULFAPYRIDINE THERAPY

There are now on record the results obtained from sulfapyridine therapy of pneumococcic pneumonia in a sufficiently large number of cases so that some definite evaluation can be made concerning this form of treatment. The earlier reports were in the main too vague and based upon only a small number of cases. Recent observations, such as that of Pepper, Flippen, Schwartz, and Lockwood<sup>1</sup>, wherein are detailed the studies made on 400 typed cases, establish certain factors as guides in the future therapy of the pneumonias.

One of these is outstanding in all reports: Sulfapyridine has reduced the mortality from pneumonia due to the pneumococcus. Preceding the use of this drug, the death rate from this disease at the Henry Ford Hospital was thirty-seven per cent; since its use, this has fallen to eight per cent<sup>2</sup>. The figure of Pepper, et al, is seven per cent for their total number of cases. However, on closer analysis the mortality percentage for Type I was only 5.8 while for Type III it was 16.4. These observers feel that the reason for the high figures in Type III pneumonia is that this organism is more frequently the causative agent in senile or debilitated patients.

Dosage can also be considered as fairly well established. Following the initial intake of two Gm. by mouth, one Gm. every four hours is administered until a total of twenty-five Gm. has been reached. This should be diminished to fifteen Gm. for elderly

people and where any renal involvement exists, because of the possible damage that sulfapyridine may have on the kidneys. Toxic reactions following the use of this drug are limited mainly to nausea and vomiting, although dermatitis, acute hemolytic anemia, and psychosis, among other effects, have been noted. Dehydration is to be particularly guarded against because of the danger of crystallization of the sulfapyridine in the urinary tract with the production of concretions.

From all data available at present, it appears that this form of therapy should be instituted immediately the diagnosis of pneumonia is made. It therefore has the advantage over serum therapy in that there is no need to wait for the production of sputum and the report of typing of the organism. The sharp drop in temperature within thirty-six hours, the marked reduction in the toxemia, and the general improvement in the patient's condition are so striking that for the present we can consider the question of the effect of sulfapyridine on resolution of the pulmonary consolidation an academic one.  
—N. Y. State Journal of Medicine.

1. Pepper, D. S., Flippen, H. F., Schwartz, L., and Lockwood, J. S.; *Am. J. Med. Sc.* 198:22 (July) 1939.
2. Smith, F. J., and Needles, R. J.; *Am. J. Med. Sc.* 198:19 (July) 1939.

### THE RELATION OF TONSILLECTOMY AND POLIOMYELITIS

The precise route by which the poliomyelitis virus enters the human organism has not been definitely established. The most commonly accepted theory is that the virus enters through the nasal mucosa along the olfactory nerves and olfactory bulb to the central nervous system. Toomey and Harman contend that the portal of entry is from the intestinal tract along the sympathetic nerve fibers to the spinal cord. Epidemiologic and laboratory studies appear to confirm the nasal theory of entry.

In 1928 Ayer reported nine cases of poliomyelitis following tonsillectomy and adenoidectomy. In 1929 Aycock and Luther reported sixteen cases of poliomyelitis occurring shortly after the removal of the tonsils. Stillerman and Fischer recently report ten cases following tonsillectomy in 1935, and three cases in 1937. The author of this article has seen two cases of poliomyelitis in which the onset occurred within a week after tonsillectomies. In the



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reported cases in which the onset of poliomyelitis occurred shortly after removal of tonsils the majority were characterized by bulbar involvement.

It seems apparent that trauma to the tissues of the nasopharynx disposes to the entrance of the virus into the body. Fairbrother and Hurst have demonstrated that the virus travels along the axis cylinders in the central nervous system. The nerves which supply the nasopharynx originate in the brain stem and this would seem to explain the high incidence of bulbar involvement following extirpation of the tonsils.

The frequency with which the onset of poliomyelitis follows the surgical removal of tonsils should discourage the procedure during the season when the disease occurs, and particularly when it is epidemic.—Journal of Iowa State Medical Society.

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## CANCER CONTROL

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### CANCER OF THE SKIN

Dr. Marion Trueheart

Sterling, Kansas

Dr. J. V. Van Cleve

Wichita, Kansas

It is probable that every skin cancer is preceded for a number of months or years by a benign or harmless sore on the skin, the prompt removal of which would prevent the development of cancer. Thus, we have thousands of deaths each year from a preventable disease; a disease that would never have developed if recognized and treated in its early stages.

It is true, that cancer of the skin occurs more often in males, and especially in those living outdoor lives, such as farmers, trainmen, sailors and all who are subjected to the effects of weather and especially direct sunshine. Blonds with uneven distribution of skin pigment are more susceptible than are brunettes whose skin seems better able to withstand the effect of exposure to direct sunlight. A large portion of skin cancers are seen on exposed surfaces of the skin; the face, neck and hands are the commonest sites. Skin cancer is not always a disease of the aged, but is seen more frequently after forty years of age.

Cancer, always common, has increased of late to such an extent that it ranks as one of the major

menaces to human life. It comes second only to diseases of the heart, blood vessels, and kidneys. Some figures, taken from recent United States statistics, will illustrate this point. In 1900 cancer was tenth place in the list of causes of death, with a rate of sixty-four deaths per 100,000 population; in 1910 it had moved up to eighth place, with a rate of eighty-three; in 1920 it was in fourth place, with a rate of ninety-nine, and by 1929 it had reach second place, with a rate of one hundred seventeen.

In 1900 cancer was commonly regarded as an almost inevitably fatal and incurable disease. Today, as a result of the diligent study in laboratories and hospitals all over the world, more is now known about cancer than was discovered in all the centuries up to 1900.

Cancer of the skin can now be produced intentionally on animals in the laboratory, the same way that it has been accidentally produced in man, by a number of different chemical agents; and its development can thus be studied in its earliest stage. The term "chronic irritation" is usually applied to the symptoms produced by these agents, when they are applied to the surface of the body, and although it cannot be said that this is the only way in which cancer originates, it is probably the chief method of development of the disease in its most common form. It has been found however that a relatively long period of time is required before cancer develops under these conditions, and that in some persons there is apparently a predisposition to such a reaction—or perhaps we may say that the resistance to such a reaction is greater in some than in others.

Thus, cancer is now recognized as a disease which originates in the body cells of the individual man or animal, not as a widespread constitutional disease, but as a local condition occurring in some restricted area which has been, usually for a long period of time, exposed to one or another of these abnormal agents known to produce it. Under the influence of these agents the body cells of the individual acquire a stimulus to growth which exceeds the normal, and brings about the formation of a local tumor composed of these same rapidly growing cells. This is the early local stage of cancer.

Cancer in its early stage may present few, if any, characteristic symptoms, but its nature can be determined with certainty under the microscope, and if the growth be cancerous, other important information can be obtained by such an examination. Thus the rapidity of growth and the degree of malignancy of a tumor may be estimated, and what is of great importance in the radiation treatment, its probable response to x-ray or radium.

The early local stage of cancer is only the beginning of the disease. The rapid growth of the body cells which have become cancerous soon leads to



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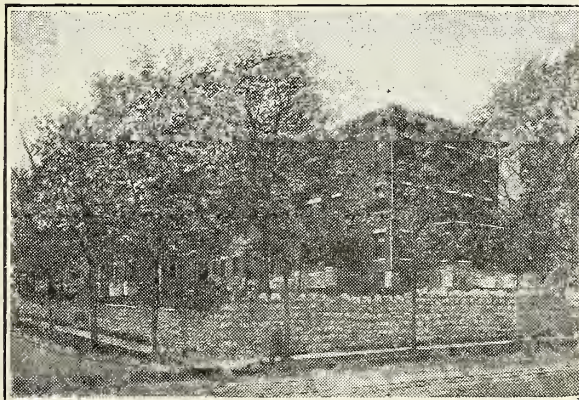
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their extension beyond their point of origin. The rapidity and extent of this spread varies in different individuals and with different tumors. It is not difficult to realize that when widespread extension of cancer has taken place in the body and great masses of rapidly growing cancer cells are scattered through the internal organs, there can be little hope for effective treatment; but in the early local stage of the disease, removal or destruction of the local process may be expected to bring about a cure. It is this fact which is of paramount significance in the diagnosis and treatment of cancer today, for we must realize that in early diagnosis and prompt and effective treatment alone lies the hope of cure.

It is unfortunate that cancer in its local stage does not cause pain. There are other early symptoms, however, which would bring the cancer patient to seek his physician's advice, if only he could be taught to recognize them in himself and in his family and friends, and if only he could be made to appreciate the vital importance of their immediate investigation. The symptoms which are to be regarded as possibly significant of skin cancer are: (1) Any sore or ulceration on the surface of the body which is slow to heal. (2) Any lump or tumor or thickening of the tissues. (3) Any scaly patch on the face or forehead that enlarges, or cracks open and oozes a serum. (4) Moles or warts that begin to show changes in size, color or texture, or become inflamed. Such symptoms are by no means a certain indication of cancer, but a thorough examination by your physician should be done immediately.

When skin cancer is once discovered, the only recognized and accepted methods for effective treatment are surgery and irradiation. By surgery the original focus of the cancer with a safe margin of healthy tissue surrounding it must be completely removed or destroyed, such operations may be performed with the scalpel or by electro surgical apparatus. Radium and x-ray are used in a similar way, not to remove a mass of tissue but to destroy or kill the cancer cells. X-ray and radium have a specific effect in killing cancer cells without permanently injuring the normal cells which encircle or surround them. Often both surgery and irradiation can be employed to advantage in a single case. Although innumerable chemicals and medicinal agents have been advocated in the past as specific cures for cancer, mostly by the quack and illegal practitioner, and although the quest for such a cure continues today, no effective treatment for cancer, except surgery and irradiation, has as yet obtained general acceptance.

Cancer is not a hopeless, incurable disease and is not contagious or in itself hereditary. There are thousands of men and women in this country today who have been successfully treated for cancer by radium, x-ray or surgery. The great hope for cancer

patients lies in their having treatment during the first stages of the disease.

## THE CANCER PROBLEM

Dr. Howard E. Snyder

Winfield, Kansas

This program is sponsored by the.....Club, the local unit of the Women's Field Army of the American Society for the Control of Cancer and the .....County Medical Society. It is a part of a state-wide campaign to help reduce the death rate in this disease which killed 2,250 in Kansas last year. It is essential that this problem be brought to the attention of the public because thirty to fifty per cent of these deaths from cancer could have been eliminated had the victims sought advice and treatment earlier.

Dr. Chevalier Jackson, the famous Philadelphia bronchoscopist, has aptly compared cancer to fire. A fire discovered early is easily extinguished; discovered late, the house usually burns down. In the control of fire we have been taught to look for a fire when we smell smoke and to call the fire department at the earliest possible moment. The telephone book prominently sets forth instructions "to report a fire, call 'Fire Department.'" Fire prevention weeks are designated. Bad fires due to carelessness or delay in calling the fire department are given wide publicity. Fire fighting equipment is being constantly improved, modernized, and rendered more efficient and more readily available.

The medical profession is doing much the same thing in improving knowledge and equipment with which to fight cancer. Surgical methods have been improved, and radium and x-ray made available. But neither the physician or fire chief meet with much success unless the public is educated to call them at the first sign of danger.

The American Society for the Control of Cancer was founded in 1913, and in 1936 the Women's Field Army was organized. The major goal of this Field Army is the education of the public to the early signs of cancer. They are attempting to do this through the medium of educational programs, newspaper and radio publicity, pamphlets, exhibits at the state fairs, and by interesting the women of the country in this vital problem.

A great deal has been accomplished in the last few years. Many of you have learned that the most important part of cancer control is early treatment, that pain is usually a late symptom, that the cancer danger signals or symptoms which may mean cancer are:



# PRENATAL SUPPORTS

Of the so-called minor complaints of pregnancy, a contributor to the medical literature\* makes the following statement concerning backache: "Backache seemed to be due to several causes. Strain of the lumbar muscles and the vertebral ligaments, due to a change in the center of gravity was often responsible; fallen arches aggravated the complaint. It was relieved by rest in bed. A maternity corset with moderately rigid stays in the back was of benefit . . . Sacro-iliac relaxation as evidenced by pain over the joint was usually unilateral and was referred along the sciatic nerve. Usually a maternity corset would relieve it. This corset should have a strap or other device that will pull it snug over the sacro-iliac region."



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\*Charles J. Marshall, New York State Journal of Medicine, Vol. 34, Aug. 15, 1934.

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5. Sudden changes in the form or rate of growth of a mole or wart.
6. A disturbance of or change in the bowel habit.
7. Difficulty in swallowing.
8. A hoarseness developing in the absence of any known infection or cold, especially if it comes on gradually without pain or discomfort.

Many of you also know of the importance of an annual comprehensive physical examination, an examination which covers all sites where cancer may develop. You should know that for this examination or at the discovery of any danger signal, you should consult your family physician, and that this is just as important as calling the fire department in case of fire rather than taking some neighbor's or friend's advice about the best way to handle the situation. You all should know that cancer should be treated by surgery, x-ray, or radium.

However, many of the public do not know about these and other pertinent facts concerning cancer. A recent Gallup Poll conducted by sampling the opinions of representative groups and individuals in every part of the country, found: "Many Americans still think cancer is incurable, and many others have erroneous ideas about it; about one person in five thinks the disease is contagious or catching (it is not) and an almost equal number say they don't know whether it is contagious or not." Many are still easy prey for the quack and charlatan with his pastes and promised cures for cash in advance.

The Women's Field Army in Kansas in cooperation with the State Federation of Women's Clubs and the State Medical Society has planned a comprehensive program of lay education concerning cancer. This year the subject of Skin Cancer was selected for emphasis and detailed presentation at public meetings. An effort has been made to present a program in nearly every town of moderate or larger size in Kansas. It is hoped that in succeeding years programs may be devoted to detailed discussion of cancer at other sites, so that in the course of five or six years, Kansans will have had opportunity to become thoroughly familiar with the fundamentals of cancer knowledge. You may help in this campaign by attending the meetings and encouraging others to do the same and by enrolling in the Women's Field Army of the American Society

for the Control of Cancer at the time of their enlistment campaign each April.

In closing I should like to tell you of the Cured Cancer Club of the American Society for the Control of Cancer. Membership is open to all those whose cure from cancer has been certified by a recognized physician five years after the completion of treatment. It was organized in 1938 by a handful of those tens of thousands of persons who have had cancer and been cured. The goal of this new organization is to focus attention on the curability of cancer and to dispel some of the blind terror that has surrounded the disease for centuries. The President of the Cured Cancer Club is Dr. Anna C. Palmer, an eighty-two-year-old physician, cured of cancer eighteen years ago. In a special appeal for members she recently said, "If those of us who from our own experience know that cancer is curable, will talk about it as frankly and as informally as we would of a broken arm, there will be a change in popular feeling. Our silence leaves the subject surrounded by terror and superstition and prevents the spread of knowledge that could save thousands of lives. We can replace fearful ignorance by helpful alertness. The growth of the Cured Cancer Club will give encouragement to the 450,000 men and women in our country who have cancer. And it will teach others the enormous value of acting promptly if symptoms appear that may mean cancer."

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## TUBERCULOSIS CONTROL

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### PHYSICIAN'S RELATIONSHIP TO THE PATIENT\*

Alfred L. Kruger, M.D.

Three reasons account for the self-discharge of patients not receiving collapse surgery: (1) a feeling of well-being, (2) conditions at home requiring their return to work, (3) the patient not sufficiently aware of the importance of bed rest in the treatment of tuberculosis and not educated properly as to the advantages of the sanatorium or hospital.

Many patients admitted to the sanatorium are not acutely ill and except for a slight cough or a sudden hemoptysis were not aware that they were ill. Mass tuberculin testing has discovered many cases of tuberculosis that are entirely asymptomatic. The news is generally received with some degree of shock, especially by those who think of tuberculosis as "consumption" and who are not aware of what can

\* *Jour. of Amer. Med. Assn.*, Vol. 112, No. 21, May 27, 1939. Reprinted from *Tuberculosis Abstracts* for September, 1939.



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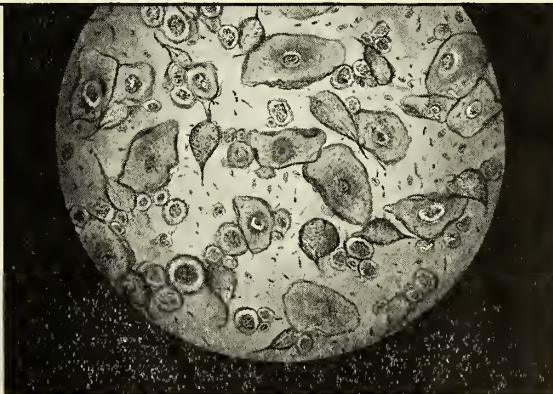
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be done therapeutically. The way a person reacts to the knowledge that he has tuberculosis and will have to remain in a sanatorium for a long time depends on two factors: (1) his inherent characteristics, whether his tendency is toward an introvert or extrovert type, and (2) his station in life at the moment and his responsibilities, such as the support of a family.

### EMOTIONAL TYPES

Extroversion may be defined as the turning of an interest outward toward some object. Introversion is the contemplation of one's own thoughts and feelings. Tuberculous patients can hardly be rigidly classified into these two groups but in each individual is the tendency to lean toward one or the other and when an individual develops tuberculosis that tendency becomes more manifest. The neurasthenic manifestations encountered in tuberculous patients are not specific but are frequently seen in individuals with any protracted illness. The physician dealing with tuberculous patients must adjust and adapt them to their illness as close to the point of contentment as is possible, instilling within them the hope and certainty that they will soon recover and return to their former usefulness to society. The patient confined to a bed-rest regimen for a number of months must be made to believe in the need for such treatment.

The extrovert is characteristically carefree and unconcerned about his condition. The problem that confronts the physician is to gain the confidence of this patient and to explain the need for prolonged treatment if he is to make satisfactory progress. Occasionally one will encounter a patient who does not adequately appreciate the necessity of intensive treatment. Here one must be frankly outspoken and attempt to show what may happen if he fails to heed the physician's advice. The patient must be made to realize that he is a sick person in spite of his apparent well-being. He must be convinced of the fact that tuberculosis, when discovered early, may be easily controlled, whereas, when the disease is of a more advanced type, it is more difficult to obtain a satisfactory result. In order to obtain the full cooperation of the patient, it is essential that he be advised concerning the development and progress of the disease through the medium of education. The physician in charge must make an indelible impression on his patient.

It is with the introvert that we must use the greatest of discretion. He has kept his troubles to himself, for his best defense has been to keep his troubles hidden. It is this type of individual that should be prevailed upon to share his innermost thoughts with the physician. He must not be allowed

to become depressed, for a happy patient with a happy, healthy state of mind is a most desirable asset in fighting a chronic disease such as tuberculosis. On the other hand, the practice of minimizing a patient's lesion, such as diagnosing an infiltrate as a "bronchitis" so as to avoid any "embarrassment" to the patient, is to be condemned. Too often patients are seen who state that their physician, several months prior to admission, told them that they had a "little bronchitis" or a "tiny spot on the lung" and advised only a couple of weeks' rest in bed. However, in a certain few select cases it may be perfectly justifiable to minimize somewhat the extent of the process. Those patients who are apprehensive and worried about themselves must be reassured and convinced that their trouble is not too far advanced and that with time they will recover. An attitude of optimism must be assumed by the doctor and imbued in the patient. The mere mention of the word "cavity" may cause them to become panicky and apprehensive.

### WINNING CONFIDENCE

When making staff rounds it is best not to discuss the case in front of the patient, except in the form of encouragement. The patient will listen intently and will invariably misinterpret every statement. The physician should devote as much time as possible to obtaining a sympathetic understanding with the patient and discuss at length any problem that may be brought up, no matter how trivial it may seem. He should be encouraged to keep interested in the news of the day. The widespread use of the radio is endorsed; its effects on the well-being of the patients have been so encouraging that in the new Hudson County Tuberculosis Hospital, every bed is supplied with an individual ear-set, so that a patient may have the choice of listening to one of four different programs without in any way interfering with the other patients in the ward.

When pneumothorax is attempted and fails, the patient will become despondent, feeling that his only hope for recovery is lost. To obviate this apparent setback one must explain that pneumothorax is merely an adjunct in the treatment; that the patient will improve with bed rest alone, but that if pneumothorax is successful it will help rest the lung a little more and tend to hasten recovery.

One has to contend with patients wanting to be discharged because they feel they can continue bed rest at home. This is not true. The majority of those who sign a release become careless and soon have to return because of reactivation of the lesion. With this group the physician must stress the dangers involved, frankly and outspokenly. Citing as an instance an individual, known to the patient,



# *In this Fight* **THERE CAN BE NO TRUCE**



Two years ago the U. S. Public Health Service launched an intensive campaign to combat syphilis. Valuable publicity in various forms acquainted the public with the gravity of the disease and many patients sought treatment. The campaign continues, for in the fight to eradicate this dread disease there can be no truce.

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who having refused advice has had to return with an advanced lesion, often helps him to comprehend the significance of his intentions.

### WHAT REST MEANS

One thing must be emphasized to all tuberculous patients, that rest means not only physical rest but also mental rest. The object of physical rest is to diminish the work of the lungs by diminishing the number and extent of the respiratory excursions. Yet, what good is such physical rest if the patient maintains a state of high nervous tension as seen in the neurasthenic type of individual? It is not infrequently noted that patients with extensive pulmonary involvement who are cheerful and mentally stable show a favorable progress.

The tuberculous person must be shielded from the cares and responsibilities of home and business. Friends and members of the family must be cautioned against bringing any news to the patient which may in any way disturb him. For that reason, sanatorium care for the patient is the desirable thing, whenever feasible, for here the individual is more or less isolated from home influences, which, although well meant, are not always to the patient's best interests and, in addition, he is under constant supervision with the knowledge that he is in the same hospital with a number of others similarly afflicted and all having the same goal. Also, from a public health standpoint, his chances of spreading his infection are minimized.

### SINUS TROUBLE AND ITS NON-OPERATIVE TREATMENT

(Continued from Page 377)

sinus treatments are the allergic type; very pale watery membrane over swollen and congested submucous tissues. The thin moist secretion frequently contains eosinophiles. Some solution for the problem in its broader aspect may be found in further allergic studies, body chemistry, influences of the autonomic nervous system, and endocrine disturbances. These latter conditions, especially in women, comprise a problem which entitles the patient to a complete examination and prolonged study. Nasal symptoms are frequently found in hypothyroidism and hyperthyroidism. Ovarian dysfunction is a potent factor with more prominent effects often apparent around the beginning of the menopause. I think no woman with any pelvic symptoms should have a sinus operation without close study by the gynecologist and co-operation between him and the rhinologist.

Limiting his work to a specialty gives no man any reason to forget that he must deal with human physiology as a whole. Specialization does neces-

sarily narrow one's field but it also carries the implication to broaden one's knowledge of all conditions that make themselves manifest thru that particular field. The specialist should never lose sight of the fact that he is first a physician. The general practitioner should not forsake his broader field to become a temporary specialist.

### BIBLIOGRAPHY

- Oaks, L. Weston and Merriall H. G., When should sinuses not be operated on. *The Eye, Ear, Nose, & Throat Monthly*; January 1935.  
 Hays, Harold, Conservative treatment of nasalsinuses. *New York State Journal of Medicine*; January 1937, Vol. 37, No. 2.  
 Shambaugh, Geo. E., What can be done for sinus trouble. *Illinois Medical Journal*, 69:417, 1936.  
 Proetz Arthur W. *The Displacement Method Of Sinus Diagnosis and Treatment*. Annals Publishing Company, St. Louis.

## NEWS NOTES

### OSTEOPATHS

Milton V. Gafney and H. C. Wallace, osteopaths, of Neodesha and Wichita respectively, filed a petition for a writ of mandamus against the board of trustees of the Wilson County Hospital in the Kansas Supreme Court on September 2nd. The action seeks to compel the Wilson County Hospital to admit the above osteopaths to practice medicine and surgery in that institution. The foremost portions of the petition are as follows:

That as manager of The Wilson County Hospital, the board of hospital trustees, superintendent and their servants and employees are specifically charged by the laws of the state of Kansas that "In the management of such public hospital, no discrimination shall be made against practitioners of any school of medicine or healing recognized by the laws of Kansas, and all such legal practitioners shall have equal privileges in treating patients in said hospital. The patients shall have the absolute right to employ at his or her own expense his or her own physician and when acting for any patient in such hospital the physician employed by such patient shall have exclusive charge of the care and treatment of such patient, and nurses therein shall as to such patients be subject to the directions of such physician, subject always to such general rules and regulations as shall be established by the Board of Trustees under the provisions of this act."

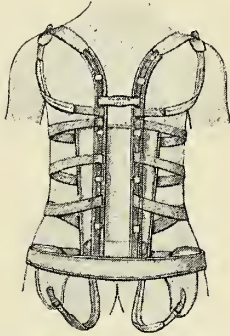
That the board of hospital trustees and the superintendent of The Wilson County Hospital and their servants and employees, under their instructions, are failing and refusing to perform the duties imposed upon them by law, are discriminating against the plaintiffs and the patients of the plaintiffs and are refusing plaintiffs the privilege of properly treating patients in said hospital and in particular are refusing in the manner and under the conditions hereinafter immediately set out.

1. During the course of their practice as osteopathic physicians the plaintiffs have had, now have and will continue to have, patients with ailments such as appendicitis, intestinal obstructions and other similar ailments which require entrance into the abdominal cavities with surgical instruments in order to effect a cure. Such patients are residents of Wilson County and have desired and now desire and will continue to



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desire entrance to The Wilson County Hospital for the purpose of being treated by these plaintiffs, but the defendants have denied and are now denying these plaintiffs the right to enter such patients in The Wilson County Hospital and are denying to such patients the right to enter The Wilson County Hospital for the purpose of such treatment by these plaintiffs.

2. These plaintiffs have had, now have and will continue to have patients residing in Wilson County who have desired, now desire or will desire to enter The Wilson County Hospital for the purpose of being treated by these plaintiffs during which treatment it becomes necessary or advisable to perform minor surgical operations or give minor surgical attention such as lancing boils, removing abscesses, hemorrhoids, etc., but the defendants have denied and are denying to these plaintiffs and their patients the use of surgical instruments in The Wilson County Hospital for such purpose and have denied and are denying to these plaintiffs the use of any kind of instrument of whatsoever nature or for what purpose while treating patients in The Wilson County Hospital.

3. Plaintiffs have had and will continue to have obstetric cases where the patients reside in Wilson County and who desire and who plaintiffs desire to enter in The Wilson County Hospital for treatment before, during and immediately after child-birth, but the defendants are denying to these plaintiffs the right to use any laxatives or any antiseptics or disinfectant, anesthesia, sedatives or palliative drug of any character, and are denying to these plaintiffs the right to use surgical instruments of any character for any purpose during or after child-birth including the care of lacerations while attending obstetric cases in The Wilson County Hospital.

4. Plaintiffs have had and will continue to have patients who desire to enter The Wilson County Hospital for treatment by these plaintiffs who will require during the course of their treatment the administration of the agencies hereinafter immediately set out and identified as paragraphs (a) to (p) but the defendants have denied and are denying these plaintiffs the right to use any of such agencies while treating patients in The Wilson County Hospital:

(a) Anesthetics, agents which temporarily destroy sensation.

(b) Anthelmintics, agents which destroy worms inhabiting the intestinal tract.

(c) Antidotes and emetics, agents which counteract or affects poisoning.

(d) Antiseptics and disinfectants, agents which destroy or arrest the development of the micro-organisms.

(e) Laxatives or purgatives, agents which increase or hasten the intestinal evacuations.

(f) Parasiticides, agents which destroy the animal and vegetable parasites found upon the human body.

(g) Sedatives and hypnotics, agents which exert a soothing influence diminishing pain.

(h) Specifics, agents which have a known selective curative influence on a particular disease, i. e., mercury and arsenic is specific to syphilis, quinine to malaria, etc.

(i) Styptics and hemostatics, agents which arrest bleeding.

(j) Restoratives and concentrated foods, differing from the term medicine as commonly used in that they supply or sustain various parts of the body, i. e.,

glucose, glandular extracts, chemical elements, vitamins, etc.

(k) Biological products, such as vaccines, toxins and antitoxins.

(l) Antispasmodics, agents for the relief of spasm in any organ.

(m) Stimulants and depressants, agents which excite action in the vital centers—usually emergency treatment.

(n) Diuretics, agents which affect kidney activity.

(o) Antipyretics, agents which reduce temperature.

(p) Cardiac depressants and stimulants, agents which affect the activity of the heart.

The use of other and all similar agencies too numerous to mention are also being denied these plaintiffs while treating patients in The Wilson County Hospital.

That the use of all of the agencies, care and treatment as set out in Paragraph VII hereof is an important and necessary part of the practice of osteopathy and is taught and practiced in legally incorporated colleges of osteopathy of good repute as such, was an important part of the practice of osteopathy during the year 1913 and prior thereto, and was during the year 1913 and prior thereto taught and practiced as an important and necessary part of osteopathy in legally incorporated colleges of osteopathy of good repute.

That the denial by the defendants of plaintiffs right to use the various agencies and method of treatment set out in Paragraph VII hereof while caring for patients in The Wilson County Hospital is contrary to the law and the statutes of this state, denies to plaintiffs equal privileges in treating patients in said hospital, denies to the patients the right to employ physicians of their own choosing, denies to these plaintiffs as physicians the exclusive charge of the care and treatment of their patients while in The Wilson County Hospital, and denies to these plaintiffs the right to practice osteopathy as taught and practiced in osteopathic colleges of good repute at the present time, during the year 1913, and prior thereto.

That the defendants in denying to these plaintiffs the practice rights herein complained of gave as their sole and only reason, that under the laws of the state of Kansas osteopathic physicians are not permitted to use any of the methods or agencies set out in Paragraph VII hereof in the treatment of their patients, and in part based the reason for their refusal upon the case of State, ex rel. v. Gleason, 148 Kan. 1, which reason was erroneous and formed no rightful or lawful reason for denying to these plaintiffs the practice rights herein complained of.

That the opinion in the case of State, ex rel. v. Gleason could not in the first instance be given such broad interpretation.

That the Supreme Court of the State of Kansas in the case of State, ex rel. v. Gleason ruled that:

"If there is any substantial controversy on this point (what judicial interpretation could be put on the phrase 'as taught and practiced in the legally incorporated colleges of osteopathy of good repute' as used in the osteopathy statute) the controversy is one of fact rather than of law."

and these plaintiffs stand ready and able to produce before this court evidence which will definitely estab-



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- ☐ N. Y. State Jour. Med. 1935, 35-No. 11,590—"Irritating Properties of Cigarette Smoke as Influenced by Hygroscopic Agents."
- ☐ Laryngoscope, 1935, XLV, No. 2, 149-154—"Some Clinical Observations on the Influence of Certain Hygroscopic Agents in Cigarettes."
- ☐ Laryngoscope, 1937, XLVII, 58-60—"Further Clinical Observations on the Influence of Hygroscopic Agents in Cigarettes."

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KAN.

lish that the practice rights contended for under Paragraph VII hereof are an important and necessary part of the practice of osteopathy, were taught and practiced as such in osteopathic colleges of good repute during the year 1913 and prior thereto, and their use was therefore part of the practice rights granted under the osteopathic practice act; that these plaintiffs were not parties in the case of *State, ex rel. v. Gleason* and to deny them necessary practice rights which hinge on questions of fact without an opportunity to present evidence would condemn them without a day in court, deny them due process of law, and deny them equal, or any, protection under the law.

That this court in the case of *State, ex rel. v. Gleason*, after correctly concluding as a question of law that what interpretation should be put on the phrase "as taught and practiced in the legally incorporated colleges of osteopathy of good repute" as used in the osteopathic practice act was a question of fact, proceeded without any evidence before it to erroneously assume as a matter of fact that "the general use of a knife or other instruments in surgical operations was regarded as unnecessary and opposed to the osteopathic system of treatment," and then based upon this erroneous assumption of fact, reached without any evidence before it, this court erroneously concluded as a question of law that the legislature of 1913 did not intend to include in the osteopathic practice act, the right to perform surgical operations with instruments because it did not conform to osteopathic teachings. These plaintiffs stand ready and able to produce before this court, evidence which will definitely establish the fact that surgery and the use of surgical instruments constituted an important and necessary part in the practice of osteopathy and was so taught and practiced in osteopathic colleges of good repute during the year 1913 and prior thereto. That osteopathic colleges established hospitals for the purpose of such teaching and practice and that such hospitals have outstanding reputation as such and that to deny to these plaintiffs the right to produce evidence on this controverted question of fact where they have important rights hinging on the finding of such fact, would be contrary to all of the decisions of this court heretofore announced and a denial to them of due process of law and equal protection of their rights under the law.

That this court in the case of *State, ex rel. v. Gleason*, after correctly concluding as a question of law that what interpretation should be put on the phrase "as taught and practiced in the legally incorporated colleges of osteopathy of good repute" as used in the osteopathic practice act was a question of fact, proceeded, without any evidence before it, to erroneously assume as a matter of fact that "the science or system of osteopathy, generally speaking, strongly oppose the use of drugs as remedial agencies in treating the sick, afflicted, or injured, and osteopathic schools and colleges of good repute contain no course for the study of *materia medica*; hence there was no real occasion to prohibit osteopaths from using drugs, since they made no claim or pretense of doing so, nor did they study to qualify themselves for such use." It then using this erroneous assumption of fact as a basis, erroneously concluded as a question of law that the legislature of 1913 did not intend to include in the osteopathic practice act the right to administer drugs of any character as remedial aid. These plaintiffs

stand ready and able to produce before this court, evidence which will definitely establish the fact that osteopathy is not and never was a drugless school of healing. Osteopathic physicians are carefully trained and were always carefully trained in the use of anesthetics, antiseptics, antidotes and the necessary narcotics. Osteopathy does now and always has sharply criticised the promiscuous and abusive injection of drugs into the human body and also has at all times sharply criticised the practice of using drugs to relieve the patient from the effect of symptoms without relieving the patient of the disorder which causes the symptoms to arise, but osteopathic colleges did not teach during the year 1913, nor do they now teach, that patients are not received in such an advanced condition of disease or ailment where the symptoms have become so severe that it is necessary to relieve the patient from the effect of the symptoms by the use of drugs while the real remedy is being applied.

Osteopathic colleges of good repute during the year 1913 and since that time taught and practiced the theory that osteopathy rendered, in most cases, the use of drugs unnecessary, but that the student should be instructed in the nature, effect and use of drugs, and in connection with every disease and body ailment studied in osteopathic colleges the allopathic theory of drug therapy was studied and considered in connection therewith. In the training of the student for the practice of osteopathy, the osteopathic colleges used the same standard text books on medical practice as were used in the allopathic schools, and the same standard texts on *materia medica* were used by the osteopathic student.

These plaintiffs do not seek the right to practice the use of drugs under the same conditions and for the same purposes as those used by allopathic physicians, but they do seek the right and claim the right under the statutes of this state to use drugs for the purposes and under the conditions which were taught in osteopathic colleges of good repute during the year 1913 and since that time, and to deny to these plaintiffs the right to produce evidence on this controverted question of fact where they have important rights hinging on the findings of such fact, would be contrary to all the decisions of this court heretofore announced and a denial to them of due process of law and equal protection of their rights under the laws.

That the plaintiffs have no plain and adequate remedy in the ordinary and usual course of law to compel the defendants to comply with the laws of the state of Kansas relating to county hospitals and to compel them to grant to these plaintiffs the rights and privileges granted them by their practice act and by the other laws if the state of Kansas, and unless the defendants are required by writ of mandamus to grant to these plaintiffs each and all of the privileges now being denied them and complained of in Paragraph VII hereof the defendants will continue to operate The Wilson County Hospital in violation of the laws provided therefor and in denial of these plaintiffs' rights and privileges herein complained of.

Wherefore, plaintiffs pray for an alternative writ of mandamus directed to each of these defendants, commanding said defendants and each of them to grant to the plaintiffs each and every practice right and privilege set out in Paragraph VII hereof or to show cause to this court on or before the — day of



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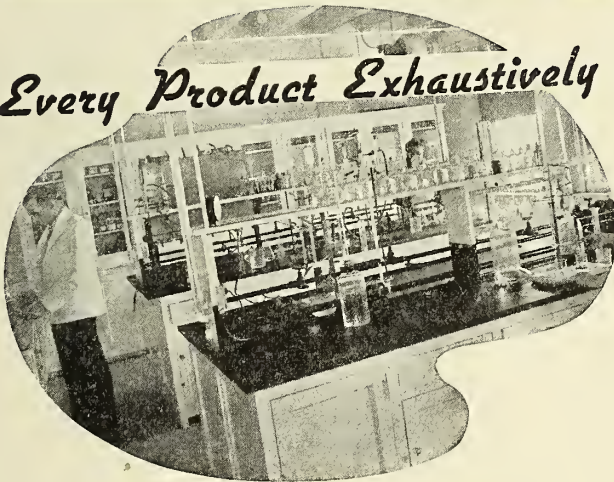
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September, 1939, why it does not do so and to adjudge the defendants to pay the damages which plaintiffs may have sustained and the costs in said case and for such other relief as the court may deem equitable and just.

Since the case was filed originally in the Supreme Court it is probable that it will be heard in that court without preliminary hearing in a District Court. It is also probable that a decision will be handed down within the near future in as much as mandamus actions in the Kansas Supreme Court are usually heard immediately.

It will be noticed that the above petition contains almost identically the same arguments made by the osteopaths in the briefs and the motion for rehearing they submitted in the Gleason case.

Attorneys for the osteopaths in the present case are Mr. Earl Hatcher and Mr. James Smith both of Topeka.

Other recent happenings in connection with the practice of medicine and surgery by osteopaths in Kansas are as follows:

It is expected that an appeal of the narcotics case of the Kansas State Osteopathic Association vs. Wm. H. Burke, Collector of Internal Revenue, will be filed in the United States Circuit Court of Appeals during September.

The Kansas State Board of Registration and Examination on the basis of complaints from patients and other evidence has recently filed actions seeking to enjoin certain osteopaths from further practice of medicine and surgery. The board has also recently filed cases against certain chiropractors and other violators of the medical practice act. The cases were filed in the name of the Kansas State Board of Medical Registration and Examination and will be handled by Mr. Theo F. Varner, attorney for the board.

### CANCER PROGRAM

The Committee on Control of Cancer recently forwarded the following bulletin to the president and secretaries of the county medical societies and to the official representatives of the other counties.

The Committee on Control of Cancer has planned an extensive program of lay education on cancer for 1939-40. This program has been worked out in co-operation with the Kansas division of the Women's Field Army and The Kansas Federation of Women's Clubs. The success of the program now depends upon the attention and interest of each County Medical Society and its cooperation with the local units of these organizations. The State units of these organizations hope to promote a cancer education program in every town in the state in which there is a unit of the Federated Clubs. You can help attain this goal by offering the services of the County Medical Society in furnishing speakers and in encouraging the women in your community to sponsor such a program.

These programs are to be sponsored by the local Federated Club, the local unit of the Women's Field Army, and your County Medical Society. It has been suggested that two speeches be given at each meeting, the first paper to be devoted to a brief discussion of the general cancer problem and the work of the Women's Field Army, the second paper to deal with cancer of the skin. (The committee hopes to promote educational programs on cancer of different areas or organs each year.)

To eliminate duplication of effort, and to more or less standardize the type of program throughout the

State, the committee has prepared suggested talks on these two subjects. These papers are to be printed in early issues of the Journal, and reprints of the same will be forwarded to the president and secretary of each county society to be available for the use of the speakers.

The Committee feels that each county society should select the speakers for every meeting held in their county. If your society does not wish to use two of their own members, they may select them from elsewhere, or the committee will be glad to furnish speakers for them.

It is recommended that the program be presented to the high school students in convocation in the morning and then to a meeting open to the general public in the afternoon or evening of the same day.

A film strip of Kadachrome pictures is available for use with the talk on cancer of the skin. The film and talk have been prepared by Dr. Marion Trueheart of Sterling and Dr. J. V. Van Cleve of Wichita. The film strip (35 minutes) will be sent to you several days before the meetings in your community if you will write the central office at Topeka to tell them the date it will be needed.

The officers of the Kansas Division of the Women's Field Army have asked that each County Medical Society elect a representative to the County Executive Committee of the Women's Field Army. The Cancer Committee is especially eager that each County Medical Society strive to establish the most pleasant relationship with its local unit to the Women's Field Army. The State organizations have enjoyed unusually fine cooperation and the Committee on the Control of Cancer has been consulted at almost every turn concerning policies for the Women's Field Army to follow. It is through this organization that we can best reach the public with the proper information about cancer. Every effort is being made to make appointments in the Women's Field Army which are satisfactory to the medical profession. Mistakes have been made, but it has been difficult to find women who are willing to undertake the responsibility and work associated with these appointments. Your support of the cooperation with this women's organization will be to your advantage and of great value in the education of the lay public with regard to the cancer problem.

### MEETINGS

The annual conference of committee chairmen and a meeting of the Committee on Scientific Work were held in Topeka, on September 10th. Minutes of the meetings will appear in the next issue of the Journal.

### CLINICAL SOCIETIES

An innovation of the Fall Conference of the Kansas City Southwest Clinical Society this year will be a series of Round Table Conferences, October 3, 4, 5, 1939, 8:30 to 10:00 a.m. Each one of these conferences will have a guest speaker representing a particular specialty, and each conference will be opened by a thirty-minute address by the guest speaker, following which, there will be an hour devoted to informal discussion.

The conference Tuesday, October 3rd, will be on obstetrics and gynecology, with Dr. John L. McKelvey, pro-



Every forward force within the Sunflower State needs to be enlisted in a martial movement that will "sell Kansas" as a place in which to live, work and play on a cooperative state-wide basis.

In order to accomplish the objective, emphasis must be laid upon constant enhancement of the state's wealth-producing activities. Principally these are:

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If industry, agriculture and recreation can be maintained and increased, every citizen and every business will benefit.

The Kansas Industrial Development Commission, sponsored by the governor and hopefully created by a progressive legislature, can be made the chief coordinating unit that will enable the army of Kansas citizens to march to happier horizons.

Will you help to make this Commission the instrument of achievement? Will you—Mr. and Mrs. Good Citizen—enlist for the "duration" of this war against state stagnation?

The recruiting polls are open today—every day—and the call to arms sounds stridently.

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fessor of obstetrics and gynecology, University of Minnesota, opening the session with an address on Remote Vascular Lesions of the Toxemias of Pregnancy and Their Clinical Significance. The entire conference will be on the toxemias of pregnancy.

Wednesday's conference will be on radiology and roentgenology conducted as a symposium on diseases of the chest. Dr. Wm. Edw. Chamberlain, professor of radiology and roentgenology, Temple University School of Medicine, will open this conference with a discussion on the Differential Diagnosis of Primary Cancer of the Lung.

The conference Thursday morning will be on proctology; a consideration of the treatment of the more common anorectal conditions. Dr. Curtice Rosser, professor of proctology, Baylor University College of Medicine, will present a blackboard talk on The Rational Management of Hemorrhoids.

An additional description of the program of the meeting may be found on page IV.

The Oklahoma City Clinical Society will hold their ninth annual fall clinical conference October 30, 31, and November 1 and 2, 1939, in Oklahoma City, Oklahoma. The following will be the guest speakers for the conference:

Dr. Albert H. Aldridge, Obstetrics, New York. Dr. Edgar G. Ballenger, Urology, Atlanta, Georgia. Dr. Lewellys F. Barker, Internal Med., Baltimore, Maryland. Dr. Lowell S. Goin, Roentgenology, Los Angeles, California. Dr. Harry S. Gradle, Ophthalmology, Chicago, Illinois. Dr. John A. Kolmer, Pathology, Philadelphia, Pennsylvania. Dr. Frank H. Lahey, Surgery, Boston, Massachusetts. Dr. Joe V. Meigs, Gynecology, Boston, Massachusetts. Dr. A. Graeme Mitchell, Pediatrics, Cincinnati, Ohio. Dr. Emil Novak, Endocrinology-Gynecology, Baltimore, Maryland. Dr. Hobart A. Reimann, Internal Medicine, Philadelphia, Pennsylvania. Dr. Erwin R. Schmidt, Surgery, Madison, Wisconsin. Dr. Herman C. Schumm, Orthopedics, Milwaukee, Wisconsin. Dr. Rock Sleyster, Psychiatry, Wauwatosa, Wisconsin, President of American Medical Association. Dr. Marion B. Sulzberger, Dermatology, New York. Dr. William A. Wagner, Otolaryngology, New Orleans, Louisiana.

## COUNTY SOCIETIES

The Central Kansas Medical Society held their quarterly meeting, September 7th at St. Anthony's hospital, Hays. Dr. L. Gilbert Little of Wichita spoke on "Management and Treatment of the Emotionally Unstable," and Dr. M. Trueheart of Sterling spoke on "Cancer of the Skin and Lip."

The Shawnee County Medical Society held a dinner meeting Monday September 11, at the Hotel Jayhawk in Topeka. Dr. George F. Greene of South Bend, Indiana spoke upon "Some Factors Tending to Reduce the Mortality in Appendicitis".

The first fall meeting of the Wyandotte County Society was held September 5th, at the Chamber of Commerce. The speakers were; A. J. Rettenmaier, M.D., who spoke on "Pelvic Appendicitis", and M. A. Walker, M.D., whose paper was, "Use of Barbiturates in Surgery".

## MEMBERS

Dr. Thomas C. Black, formerly of Norton, is now a member of the staff of the Florida State Sanatorium for Tuberculosis, at Orlando.

Dr. Ralph I. Canuteson, of Lawrence, is the author of an article "A Study of Physical Examination Records in Use in Health Services," published in the August issue of the Journal Lancet.

Dr. F. E. Dargatz, who has been employed in public health work in Oklahoma, has returned to Kinsley to open an office.

Dr. John W. Hertzler, of St. John, has moved to Newton where he will be affiliated with the Bethel Clinic.

Dr. W. L. Jacobus, Jr., of Ottawa, has moved to Los Angeles, California, where he has accepted a residency at the Good Samaritan Hospital.

Dr. D. C. McCarty, of Nashville, has left for a year's post graduate work in Chicago.

Dr. Charles T. Sills of the Axtell Clinic, Newton, has recently accepted a residency at the Hospital of the Good Shepherd, Syracuse University, Syracuse, New York.

Dr. Leon W. Zimmerman, formerly of Hugoton, has moved to Liberal where he will be associated with Dr. A. L. Hilbig and Dr. E. J. McCreight.

Dr. G. H. Jackman, of Meade, has returned to Cimarron, where he formerly practiced.

Dr. W. T. Grove, of Liberal, has recently moved to Eureka.

Dr. L. F. Schumacker, formerly of Meade, has moved to Dodge City, where he will be associated with Dr. Foster L. Dennis.

## DEATH NOTICES

Dr. Hayes W. Brownfield, sixty years of age, died August 2, at his home in Anthony, after an illness of six months. Dr. Brownfield was born in Buffalo, Kentucky, October 24, 1879, and graduated from the Hospital College of Medicine, Louisville, Kentucky, in 1901. He was a member of the Harper County Medical Society.

Dr. Howard F. Craig, of Protection, fifty-five years of age, died June 11, in Harper County, Oklahoma. Dr. Craig received his medical education from the Electric Medical University, Kansas City, Missouri. He was a member of the Comanche County Medical Society.

Dr. Raymond Fox Roller, fifty-four years of age, died August 11, at his home in Altamont. Dr. Roller was born April 16, 1883, at Brooksville, Ohio. His family moved to Kansas in 1896. He attended the Kansas Medical College, Topeka, and was a member of the Labette County Medical Society.

## AUXILIARY

### PRESIDENT'S MESSAGE

The school bells have rung and we can begin to make plans for our work. Every county unit should be getting materials together. Each Chairman should be planning her years work.

Wouldn't it be nice if the wife of every doctor that belongs to the State Society would join us and help us promote the program? It is important to think on these things.

The Public Relations Committee can do much to let the lay person understand the doctor and what he has to offer. Many organizations in every community have well organized health programs. Why not then tie our Health Education and Public Relations Programs together to help interpret the doctor to these people.

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Our National Program Chairman has outlined a few things for us, namely; create a year of planned activities sufficiently interesting to—

1—Attract new members—Far too many eligible women outside ranks.

2—Increase attendance at each meeting.

3—Stimulate interest in the educational work.

Some of the most important projects every true Auxiliary should follow—

1—An active campaign to increase the sale and distribution of Hygeia.

2—An active years work in Public Relations.

3—Develop an alert, interested Legislative Committee.

4—Give serious thought to the social side of the organization and plan in advance for meetings throughout the year designed to bring members close together in friendly relationship.

5—Incorporate some talks throughout the year on health topics as well as the social-economic problems that confront the medical profession today.

Publicize to outside groups, as well as to Auxiliary members, the regular radio program, "Your Health," sponsored by the American Medical Association.

My Chairmen and I stand ready to help you with any of your local problems. Just use us.—Mrs. La Verne B. Spake.

Auxiliary work not having begun at this writing, no news items have been sent, so the balance of our space is given to editorial thoughts.

The expressed thought of our Advisory Committee and the established policy of the National Officers of the Auxiliary is that of public education. This is to be accomplished through the intimate cooperation of the Program Committees, whose educational programs will inform the membership; the Health Education and Public Relations Committees. So closely coordinated are the two latter committees in this lay project that they should work as one.

No county Auxiliary is too young or small to do a share of this work. Even in small communities where there is only a single doctor's wife, she, alone, may "Shed light in dark places."

We may no longer hope to win by fighting only defensively. We must not only parry blows, but must carry on aggressively and with initiative. This, not only as an organization, but as individuals. Below are excerpts from the address of Mrs. Kech, Past National President:

"We must assist the parent organization in its herculean task of enlightening the public to steer clear of the shoals and reefs of regimented medicine; we must keep watch to guard the public against the shifting bars of cultisms. We must do our part to point out to the people of America the true channel to National Health. This we must do before we can begin an intelligent examination to determine whether we have kept our ship on an even keel."

"By and large, this means the appraisal of you—you in your county unit. This is no place for subjective analyses, but I commend such an undertaking for your consideration.

"We are aware that many thousands of woman's organizations through out the nation were receiving propaganda that emanated from the advocates of health insurance and regimented medicine. Every convert to this philosophy was one more stumbling block to the preservation

of the standards of American medicine that today leads the world. There was little we could do to stop this propaganda at its fountain head, but there was much that could be done through the concerted effort of our organization among intelligent lay groups. It was necessary for us to meet our enemy on the open sea, ever prepared for submarine attack. We did this by a vigorous educational campaign (informing and stimulating our own members to the medical principles involved in this changing social fabric."

—Mrs. W. G. Emery: Press-Publicity Chairman.

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1. Q. What allergic diseases occur in infants?  
A. *Gastro-intestinal allergy. Pylorospasm. Eczema. Bronchial asthma.*
2. Q. What sugars may be allergenic?  
A. *Honey, cane sugar, beet sugar, barley sugar.*
3. Q. What makes Karo safe bacteriologically?  
A. *Karo is heated to 165° F. and poured into pre-heated cans and vapor vacuum-sealed for bacterial safety.*
4. Q. What is a goat's milk formula for the newborn?  
A. *Evaporated goat's milk, 6 ozs. Boiled water, 12 ozs. Karo Syrup, 2 tablespoons.*
5. Q. What is a vegetable milk formula for the newborn?  
A. *Powdered vegetable milk, 6 tablespoons. Boiled water, 20 ozs. Karo Syrup, 2 tblsps.*

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# The Journal Of THE KANSAS MEDICAL SOCIETY

*Owned and Published by The Kansas Medical Society*

Volume XL

OCTOBER, 1939

Number 10

## THE INJECTION TREATMENT OF HERNIA BASED ON A STUDY OF 528 CASES\*

Arnold S. Jackson, M.D.

Madison, Wisconsin

Five years ago I began the treatment of hernia by the injection method and during this period 528 hernias in 450 patients have been treated at the Jackson Clinic. If this method was not proving satisfactory to both the patients and ourselves, it would certainly have been discarded long since. It must now be apparent to even the most ardent opponents of injection therapy that the injection treatment of hernia as well as hemorrhoids, varicose veins, hydroceles, and ganglia can no longer be considered merely as a mediocre substitute for surgery. Observation and experience in a considerable series of all these conditions have convinced me of the scientific merits of injection therapy. More and more, surgeons who have approached this subject with an open mind, have come to a similar conclusion.

As a result of a study of the injection treatment of hernia at the University of Minnesota Medical School, I became interested in this subject in 1933, and after considerable reading and investigation, my skepticism was sufficiently overcome to try it. I learned that the idea was nearly a century old; that it had been attempted repeatedly and discarded as often. Large series of cases successfully treated had been reported by a few authorities, but it was not until the Minnesota investigators approached the subject from a purely scientific standpoint through animal experimentation and by pathological studies that the genuine interest of the medical profession was aroused. Drs. Bratrud, McKinney and Rice emphasized the importance of the proper selection of cases, the value of a standard solution, and especially the proper fitting of the truss.

I grew up in a family of surgeons who looked upon anything like a truss or the injection treatment of hernia as bordering on quackery. These opinions have had to be revised. One must completely dissociate from his mind any connection between the

old paraffin method of attempting to check the progress of a hernia, and the present conception of its treatment by injection. The latter is based on the idea of injecting a foreign substance into the tissues which will stimulate the fibroblast cells to grow and heal a defect. As for trusses, there is so much to be learned that my associate, Dr. Luther Holmgren, is making a special study of this subject. No matter what kind of solution is tried or what technique of injection is employed unless the right truss is properly applied this method is apt to be unsuccessful.

Although my associate and I have given approximately 5,000 hernia injections, no serious complications have occurred. There are a few reports in the literature of serious catastrophies and undoubtedly these will continue because this method requires the same judgment, training, and experience as the surgical procedure.

Hospitalization was required on one of our cases because a piece of omentum became adherent and sloughed requiring drainage. This patient, an elderly man, removed his truss a few weeks after beginning treatment. Following incision and drainage, the infection subsided rapidly and later his bilateral hernias were treated successfully by injection therapy.

With this method it has been possible for both men and women patients to continue their daily occupation. This is an economic saving to farmers, business and professional persons and for this reason it is not difficult to understand their enthusiasm. We have treated several physicians who have been able to perform their routine duties without loss of time required by an operation and the period of convalescence.

In this time of economic distress, the financial saving of a large hospital bill and surgeon's fee is of extreme concern to many people. Even more important is the loss of wages. It is of interest to learn that the average cost of a herniotomy to a laboring man, including surgeon's fee, hospital bill, and loss of wages has been estimated to be \$315.00.

While the financial problem is a matter of concern to the average person, he is naturally more interested in the risk involved, the discomfort entailed, and the probabilities of a cure. This series of injections

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which were given for direct and indirect inguinal, umbilical and femoral hernias in men, women, and children with no serious complication indicates that if the injection therapy is correctly used the risk is infinitesimal. The same cannot be said for surgery. At one large New York hospital there were twenty-five operative deaths, 133 infected wounds and over twenty-nine per cent recurrences in a series of 975 operations for hernia.

While it cannot be denied that wearing a truss for six months or longer is not without its discomfort, many persons would prefer to do this, if necessary, all their lives rather than undergo an operation. If this were not true, thousands of people who are wearing trusses today would have consulted a surgeon long since. As surgeons we see but a fraction of the number of persons who are afflicted with hernias most of whom are wearing ill fitting trusses applied by non-medical persons. As regards discomfort the sclerosing solutions now used do not require a preliminary injection of novocain because they can be administered without pain. The injection method in most instances requires a series of weekly injections over a period of months which is annoying to some persons and we frankly advise them to choose surgery.

Recurrence of hernia is of great importance to both the patient and surgeon. Even as great a surgeon as Billroth frankly admitted that if the proper solution could be developed, the injection method would supersede surgery. To reduce the number of failures following herniotomy, surgeons have changed from one technique to another. Various procedures have proved of value in certain cases and all have failed at times. The number of recurrences for repair of direct inguinal hernia has been estimated to approach thirty per cent in some institutions. For the indirect type, probably one-half of this figure would approximate the end results throughout this country. After a patient has undergone two or three herniotomies without success, he is naturally interested in the possibilities of the injection method and some of our most appreciative patients are of this type.

We see many cases of hernia unsuitable for injection which we continue to operate; all strangulated, irreducible, and ventral hernias are in this class. So far we have not seen an epigastric hernia that did not require an operation because it was irreducible. About one-half of the umbilical and an equal number of the femoral hernias have been operated upon. Certainly the injection treatment of these two latter types of hernia should be performed only by one familiar with the anatomy and surgical procedures involved. In the injection method as in the surgical treatment, the direct type of hernia has

proved more difficult to cure than the indirect. These difficulties are accentuated in the female and the obese.

The question of obesity is of importance in regard to either method of treatment. We learned early that obese patients tend to develop a recurrence following herniotomy or injection therapy. As a result a dietetics department was established in connection with the hernia clinic and all over-weight patients are required to reduce before their hernias are repaired. We readily obtain the cooperation of the patients, most of whom are anxious to reduce to normal weight. Many of these are given the assistance of thyroid and pituitary therapy and their condition is checked twice a month until a suitable reduction is obtained.

Will the end results of injection therapy prove any more successful than the surgical treatment of hernia? I honestly do not know and I question whether anyone else knows at this time. The present methods of injection therapy have scarcely been observed over a sufficient period of time to judge the end results. Five years should elapse after either operation or injection therapy before statistics would be of much value. Recurrences develop at much longer periods but if eighty-five per cent of the hernias injected proved satisfactory five years following treatment, the method might certainly be considered successful and undoubtedly the majority of patients would be satisfied with such results. For those who developed a recurrence, a few more injections would not be a matter of great concern. At the Minnesota Clinic, many hundreds of cases have been followed for several years with excellent results. We have checked a group of 200 cases after an elapsed period of two years and there is every indication to expect a cure in the majority. In certain instances where results were unsatisfactory, experience has shown that insufficient injections have been given; that an improperly fitting truss has been worn; that the patient was too obese, or that he failed to cooperate. Careful observation of these points, experience, and the use of improved solutions have given quicker and more satisfactory results.

There is one important difference in recurrence following injection therapy and surgery. In the former the condition may frequently be corrected by a few more injections. A second herniotomy is usually a tedious and a more difficult procedure than the original one.

We feel that this method should not be attempted without first observing it and receiving instruction from someone who has had considerable experience with it. Consequently, I will not attempt to discuss the technique in detail but will only mention a few



important points and summarize the findings in our five years study.

In approximately 5,000 injections in 450 patients with 528 hernias, there have been no cases of infection, impotence, or peritonitis. The injecting solutions are sterile so that with reasonable precaution, there is little danger of infection. Before injecting any solution, one should aspirate to be sure the needle has not penetrated a blood vessel. In six instances this occurred, but the needle was at once withdrawn, reinserted, and following a negative aspiration, the solution was injected. The amount of reaction depends upon the kind of solution, the susceptibility of the patient's tissues to the solution, the site of injection, and the activity of the patient. The solutions used are Proliferol and Sylnasol. Occasionally patients complained of swelling of the cord within a few days after an injection. Usually this disappeared in a few days; occasionally it persisted for a week and in these cases injections was not repeated until the swelling had subsided.

In most of our cases injections were given a week apart until the hernia appeared well-closed. The intervals were then prolonged, two or more injections being given a month or two apart. However, when patients were hospitalized because the size of the hernia was such it could not be held by a truss, injections were given every day or two without causing undue discomfort. While one great advantage of the injection method is that it does not interfere with the patient's occupation, it is desirable for him to refrain from unnecessary activity if a speedy closure is desired.

The number of injections required depends upon several factors; the kind of solution, the type and size of the hernia, the age of the patient, his weight, the reacting power of his tissues, and finally upon the truss and its proper application. The activity of the patient and the physician's experience also have an influence.

At the beginning of our studies, we felt that six or seven injections were sufficient and in some cases and with certain solutions this was true, but time has shown that in the majority this was insufficient. At present most of our patients receive ten injections and are then advised to return at intervals of two or three months for further treatment, if necessary. We have had some remarkable cases where, following one or two injections, there was a severe reaction, the hernia closed and the patient felt completely relieved. We did not consider these patients cured, but gave at least five additional injections for re-enforcement. On the contrary, there have been instances in which as many as fifteen injections have been given before a satisfactory closure was obtained. This has been similar to the expe-

rience of others and is probably accounted for by one of the factors mentioned above. Certain individuals appear to react more favorably to one solution than to another.

The younger the patient the more quickly the hernia heals. Satisfactory results in babies and children are often speedily attained, whereas in elderly persons the tissue reaction may respond slowly, necessitating wearing a truss for a longer time. It is generally agreed that in the aged the tissues do not heal as quickly and firmly as in youth. It is, however, at this age that surgery is attended with considerable risk so that this method is ideal. The youngest patient in our series was two months and the oldest eighty-one years.

Some large hernias may be closed as satisfactorily as smaller ones provided they can be completely reduced and satisfactorily held by the truss. Small hernias in wiry, muscular persons naturally respond to treatment more quickly. The truss plays a very important part in the successful treatment of hernia by injection therapy, and we have found the spring type to be the most satisfactory. We employ about six types suiting the truss to the particular patient and hernia. The truss must fit like a glove and at the same time cause no discomfort. If a patient has not previously worn a truss, no attempt is made to start treatment until he has had time to become accustomed to it since the truss must be worn until at least six months have elapsed following the last injection. Since the truss must be worn next to the skin, its care is important and it must be sponged with alcohol twice a day to prevent chafing. However, little trouble will be encountered in patients who have worn a truss for years.

Sufficient time has not yet elapsed for us to say that the scar tissue formed by injection therapy will be permanent and we have frankly stated this opinion to our patients. They still prefer this method to surgery even if they have to return for further injections later. As a result of our experience, it does seem probable that such will be the case. Furthermore, there are now published large series of cases from many well-known institutions that argue for the success of the method; industrial commissions in various states are recognizing it and insurance companies are approving it.

## CONCLUSIONS

The injection treatment of hernia has now proved of sufficient merit in the hands of capable, scientific investigators to warrant its acceptance by those interested in the problem of hernia. It is advantageous both from a mortality and economic standpoint. The proper selection of cases, a sufficient number of injections, the proper fitting of a truss, the treatment

of obesity, the use of improved solutions, and experience have given quicker and more satisfactory results. Babies, children, and the aged have all responded well. It may be necessary to reserve final opinion of the ultimate results of this procedure until sufficient time has elapsed to carefully study the results.

## DIAGNOSING DISEASE WITHOUT INSTRUMENTS OF PRECISION\*

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I hope the title of this paper does not convey the impression that I advocate the practice of medicine without the use of instruments of precision. I hope also that this title may not seem like the credo of a reactionary, who is too sluggish intellectually to keep up with the rapid advances in medicine and as a defense mechanism "pooh-poohs" procedures which he either has not taken the trouble or lacks the ability to understand. There has never been a period in the history of medicine, the advances of which have been comparable to those of the last century, and most of these advances have been directly or indirectly, the result of study with instruments of precision.

There is, however, with every new advance, a tendency to forget some of the things that have long been the heritage of the medical profession, and also to neglect the simpler methods of diagnosis and therapy for the new ones which have recently appeared. Some younger physicians apparently forget, for instance, that fluid in the chest can be diagnosed by physical examination as well as by the x-ray, and it is necessary to bring to the attention of many physicians that Fowler's Solution will often lower the leucocyte count in leukemia quite as effectually as the x-ray. Some of these same individuals would, perhaps, be very surprised to learn that Hippocrates recommended artificial pneumothorax in the treatment of pulmonary diseases, and that Galen was a master of psychoanalysis. Looking at the matter, however, from the other point of view, there are many conditions which can only be diagnosed by the use of instruments of precision; and without these instruments, many diagnoses, as well as therapeutic measures, are apt to be as unsatisfactory as the speculations of medieval scholastics. On this account, I shall attempt in this short paper to steer a middle course, and shall point out, from time to time, cer-

tain diseases in which the use of instruments of precision are just as necessary as their use is unnecessary in others.

In the beginning of any paper, it is, I believe, customary to define the subject about which the essayist is going to speak. In this particular instance, this is rather difficult. The reason is, of course, obvious. What is an instrument of precision to one individual may not be so to the other. There is also an innate tendency to regard as instruments of precision those instruments which are very complicated, and whose working the novice does not understand very well. There is another difficulty which arises from the fact that what seems to the uninitiated an instrument of precision becomes, as one is better acquainted with it and knows its limitations and its pitfalls, not an exact instrument, but one that gives only approximate results.

When the stethoscope was first introduced it was considered an instrument of precision, and the same was true of the thermometer and the blood pressure apparatus. At the present time they are not considered by physicians as instruments of precision any more than the finger tips. This is due to the fact that most of us have become familiar with these instruments; and also because this familiarity with them has shown us that they are, after all, subject to strange caprices, and can easily lead us astray.

In discussing this subject we might, perhaps, make a practical definition by including as instruments of precision, those instruments which can only be employed after considerable special training, which is not an accomplishment of most members of the medical profession. I realize that this classification is rather inexact, but I shall include under instruments of precision the x-ray, the electrocardiograph, and various quantitative laboratory procedures, which can only be carried on in a well-organized laboratory with special apparatus, which can be employed only by persons with special training.

One of the most important aids a physician has in the diagnosis of disease is the history. It is a conservative estimate, that in a great majority of patients the history obtained from the patient contributes at least fifty per cent, and according to some seventy-five per cent, towards the establishment of a correct diagnosis. It is surprising how many incorrect diagnoses are the result of careless history-taking. The history of a patient who has an inability to walk in the dark and has lightning pains in the legs is just as important in the diagnosis of tabes dorsalis as the presence of a positive Wassermann. Similarly in a patient who gives a history of increasing sluggishness, gain in weight, inability to keep warm at night in bed, increasing dryness of the hair and roughness of the skin, we can make a diagnosis of myxedema,

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and predict that the basal metabolic test, if carried out properly, will show a rate below normal.

Volumes have been written on the subject of pain, and in a host of diseases nothing helps us more in the diagnosis than careful attention to the location and character of the pain present. Angina pectoris is a disease which may show nothing characteristic in the physical examination or in the electrocardiogram. Indeed, I recall several patients dying from this disease in whom the autopsy findings were not characteristic or distinctive. Yet, the history alone of the affection, as so masterfully portrayed by Herberden more than a century ago, permits the diagnosis of the disease in most instances. The story of a severe pain under the sternum gradually increasing in intensity and radiating down the left arm is unlike the story of any other disease. Pain is a very real phenomenon, and of real importance in diagnosis, but is, however, one that has refused to allow itself to be recorded on any type of a registering device.

Another disease which has a very characteristic history is duodenal ulcer. The characteristic features of the history of this disease are the chronicity and pain. Pain on an empty stomach, recurring two to four hours after meals and relieved by food and alkalis is pathognomonic of this disease. I have noticed that the internists in our clinic usually make the correct diagnosis of duodenal ulcer in most patients from the history alone, and before the patient has had a gastric analysis or been in the hands of the roentgenologist. In a recent examination of 100 consecutive cases of duodenal ulcer I found that all of them gave a history of chronicity, of pain before eating, and two to four hours after meals, and that all but one were relieved by either food or alkalis or usually by both. This statement should not be construed as a suggestion that the gastric analysis and the x-ray examination be omitted in these cases. Indeed, we carry out both procedures in every case of suspected duodenal ulcer. It does, however, stress the importance of the history in the establishment of the diagnosis of this disease, and clearly shows that the physician need not throw up his hands and refuse to treat a patient with duodenal ulcer because that physician does not possess an x-ray apparatus or does not care to carry out a gastric analysis. Indeed, I have recently seen a patient who gave a typical history of duodenal ulcer extending over a period of several years, who had had no treatment because the physician could find no x-ray evidence of ulcer. This patient had never had a gastric analysis. The gastric analysis in our clinic showed a marked hyperacidity, and our roentgenologist succeeded in finding an ulcer in the duodenum.

Doctor Paul White, in discussing diseases of the

heart, makes the following very significant statement. Among the procedures necessary for correct diagnosis, he says, "First and most important of all is the story of the patient. After the history taking there comes next in importance the physical examination. Then there follow methods of less value, but nevertheless of importance, blood pressure measurement, roentgenology and electrocardiology."

Heart disease in the year 1935 was the cause of 177,759 deaths in the United States. In no field of medicine have the advances in accuracy of diagnosis been more spectacular than in cardiology. These advances have been due in no small measure to the employment of instruments of precision, particularly the electrocardiograph. It is astonishing, however, how accurate diagnoses can be made employing only the procedures of inspection, palpation, percussion, and auscultation. While the electrocardiogram has been of the utmost value in explaining, for instance, the mechanism of various types of arrhythmia, yet these types of arrhythmia can be diagnosed with a great deal of precision by simple methods of examination.

Sir James Mackenzie many years ago, stated that the three types of cardiac irregularity usually met with clinically were, what he termed, the youthful type of irregularity, the adult type of irregularity, and the dangerous type of irregularity. These three types we call today, sinus arrhythmia, extrasystoles, and auricular fibrillation. In a great many patients, they can be diagnosed by simple inspection of the neck without even recourse to palpation or to the stethoscope, not to speak of the electrocardiogram. Inspection of the carotid artery shows the following characteristics in these three types of irregularity. In sinus arrhythmia the pulse is faster during inspiration than during expiration. In extrasystoles there is an extra beat followed by a long pause after which the pulse resumes its normal regularity. In auricular fibrillation the carotid pulse is utterly irregular, the beats following each other in a haphazard fashion, and showing great variations in size. These findings on inspection of the carotid, are reinforced by inspection of the jugular pulse, but if our eyes are sharp enough, we may note, that in auricular fibrillation, there are only two waves in the venous pulse as compared with the normal three, and in auricular flutter we may see the flutter waves.

The importance of the examination of the pulse in heart disease needs more emphasis now than ever, because of a tendency to slight this very important procedure. No one has ever done more for the advancement of cardiology by instruments of precision than has Mackenzie. For this reason, the following quotation from him is significant: "In the examination of the arterial pulse, several methods

may be employed, as exploration by the finger, by graphic records, and by instrumental measurement of the arterial pressure. By far the most important of these methods is the first. There is a tendency to exalt the others at the expense of the digital, but no apparatus can ever replace the trained finger. No doubt the other methods can give very definite information of a limited kind, but in diagnosing the patient's condition, they should only supplement the digital examination."

The collapsing pulse of aortic insufficiency is so characteristic that the diagnosis of this condition can be made by palpating the pulse. Similarly, the small hard pulse which rises slowly and falls very slowly is equally diagnostic of aortic stenosis. The pulsus alternans, of such grave significance in myocardial disease, and the dicrotic pulse so suggestive of typhoid fever can be easily perceived by palpation. The bigeminal pulse, in which we feel two beats followed by a pause and then two more beats, is a common finding in patient's who have taken too much digitalis. When a physician has been giving a patient digitalis for a time, and feels this type of pulse, it is a warning to him to discontinue digitalis therapy—and a warning which is just as unmistakable as that shown by an electrocardiogram. Among other palpatory findings of great diagnostic importance are the presystolic thrill of mitral stenosis, the rasping systolic thrill of aortic and pulmonary stenosis, and the diastolic shock of an aortic aneurysm. These findings are all just as important and as certain as anything in medicine.

Percussion of the heart always repays the effort expended. Percussion of the heart demonstrates cardiac enlargement far better than a study of axis deviation in the electrocardiogram. The displacement of the heart to either side can usually be as accurately demonstrated by percussion as by the x-ray.

Auscultation of the heart has led many great men astray. Laennec, the father of auscultation, you recall, in the first edition of his "Traite," stated quite dogmatically, that the lesions of the heart could be diagnosed by listening over the valve in question. Eight years later at the time of the second edition of his "Traite" he was a wiser and sadder man; but in this edition he made an even greater mistake by reversing himself completely, and stating that auscultation of the heart was of no value in the diagnosis of valvular disease.

Auscultation of the heart, we should not forget, gives better evidence for the diagnosis of mitral stenosis, of aortic insufficiency and of the less common lesions than does any instrument of precision. Gallop rhythm is well described as a cry of the heart for help. It is a cry that is heard only with the

stethoscope. Pericardial frictions, machine murmurs, the Duroziez murmur, and the Flint murmur, are all phenomena that are heard.

Physical examination is also of great value in certain other heart conditions which are sometimes considered the exclusive preserve of the electrocardiogram. I refer particularly to bundle branch block and coronary occlusion. The diagnosis of bundle branch block can be positively made in many cases only with the electrocardiogram. King, however, has shown that in bundle branch block there is a double or bifid apical thrust of the heart during systole in eighty-four per cent of the cases. I should prefer, however, to confirm a tentative diagnosis with an electrocardiogram. In the case of coronary occlusion, however, conditions may be quite different. In many cases the history, the type of pain, a localized area of pericardial friction, and leucocytosis, make the diagnosis fairly certain. If it is convenient to obtain an electrocardiogram on such a patient, it should be done; and if it can be brought to the bedside without a great expenditure of energy, and money, the electrocardiogram should be taken. However, I have, on more than one occasion, seen a patient transported to the electrocardiograph at some risk to his physical condition, where it would have been far better to have left him alone than to have subjected him to further danger, for the purpose of confirming a diagnosis already fairly certain. It should also be remembered that there are silent areas of the heart in which lesions do not give any characteristic electrocardiogram when taken in the usual fashion.

The above remarks are not to be construed as disparaging the electrocardiograph as an instrument. Doctor S. A. Levine, of Boston, who certainly has no reason to be critical of electrocardiography says: "An able clinician who knows nothing about the string galvanometer, can still do better work than an expert in electrocardiography who has limited bedside experience and inadequate clinical judgment."

In the diagnosis of the anemias, the leukemias, a blood count is usually decisive. The blood counting apparatus is a simple one which is inexpensive and can be easily mastered. Much additional information of value can, however, be obtained by methods even simpler than blood counts. The absence of free hydrochloric acid in the gastric juice of patients suffering from pernicious anemia is, of course, one of the cardinal signs of that disease. Similarly the physician hesitates to diagnose myelogenous leukemia without the enlargement of the lymph glands. In cases of bleeding a gross examination of the blood will distinguish between hemophilia and thrombopenic purpura. If the blood is collected in a small test tube, the clot of the hemophilic blood is normal in appearance showing characteristic retraction, while



the clot in thrombopenic purpura does not retract at all.

Diabetes is a disease, the knowledge of which is in a great measure due to exact laboratory procedure. Much of the information we have could have been obtained in no other way. Yet, it is a mistake to think that extremely technical procedures are absolutely necessary for the treatment of a diabetic patient.

The glucose tolerance test, which may be regarded as an exact laboratory procedure, is of great aid in an exceptional case which has been long considered a case of diabetes mellitus, but does not behave as such. In such instances, however, the history should give us the clue and then the test can be carried out in a well-equipped laboratory. The routine of carrying out a glucose tolerance test in every patient with glycosuria is an absolute waste of time, unless the physician is studying some scientific problem connected with sugar metabolism. In most diabetics the history and the demonstration of sugar in the urine clinches the diagnosis. If the blood sugar is high, especially two hours after meals, the diagnosis is fairly certain.

There is one striking phenomena which is extraordinarily common in diabetes, which cannot be demonstrated by any instrument of precision. I refer to the acetone breath. The ability to smell this peculiar sweetish odor of the breath seems to vary with different physicians, but is certainly present in a marked degree in most people. The presence of such a breath in an individual who shows sugar in the urine is rather conclusive evidence that he had diabetes mellitus.

The more the physician treats diabetes, the less frequently does he have blood sugar determinations made on patients. They are often of value, but the urine examination is both simpler and more important. It is more important to know whether a patient is secreting sugar during a twenty-four hour period and, if so, how much, than it is to know the exact height of his blood sugar at the precise moment that the blood is drawn. It cannot be emphasized too strongly that the blood sugar has constant, probably minute, variations. A patient may have a high blood sugar every afternoon, and a low or normal blood sugar in the morning before breakfast. In such a patient, if we were to rely entirely on the height of the blood sugar before breakfast, we should think everything was going along nicely. When, however, we examine the twenty-four hour specimen of urine, we should find sugar in it and thus, know that all is not as well as it seems. Woodyatt showed, many years ago, that it was possible to treat a patient in diabetic coma and rescue him by examining only the urine.

During the past fifteen years, I have seen many diabetic patients who were terribly disturbed because they had a high blood sugar and showed no sugar in the urine. The knowledge that they had a high blood sugar was a very depressing factor in their illness. Such patients often show blood sugars from 200 to 300 every morning and yet never show sugar in the urine. Next to insulin, the best treatment for these patients is the avoidance of blood sugar determinations.

In diseases of the kidney and so-called essential hypertension blood chemistry studies and delicate functional tests have greatly increased our knowledge of these diseases. They have not, however, fundamentally altered the treatment or made antiquated our methods of diagnosis. In spite of repeated attempts to estimate kidney function by means of a variety of tests, we cannot diagnose a failing kidney until three-fourths of the glomeruli have been destroyed. In the diagnosis of diseases of the kidney the sheet anchors are still the sphygmomanometer and the examination of the urine for albumin and casts. In that interesting disease, known as lipoid nephrosis, these examinations alone are usually sufficient for the diagnosis. Such patients, in spite of marked albuminuria and edema, show a normal blood pressure and a heart of normal size.

The examination of the stools is becoming a lost art, possibly because the physician of today finds the procedure rather disagreeable and imagines that other methods of examination will make up for his negligence in this respect. It should not be forgotten, however, that clay-colored stools still signify obstruction of the bile duct, tarry stools indicate hemorrhage into the gastro-intestinal tract, and that bulky, foamy stools still suggest pancreatic disease.

These remarks that I have made on the subject, "Diagnosing Disease Without Instruments of Precision," do not, I wish to emphasize anew, carry with them any slur upon these instruments. Personally, I employ them every day in my practice. Thousands of physicians do the same.

A colleague of mine a few years ago was very much incensed at the basal metabolic apparatus because it did not tell him which thyroid patients were going to survive operation and which were not; and he was threatening to give up its use altogether. I finally persuaded him not to, by pointing out that the basal metabolic apparatus was not a surgical oracle which answered questions of surgical mortality, but simply an apparatus to do what it was intended to do, namely, to estimate the basal metabolism and nothing else.

There is a great tendency at the present time in medicine to exalt what seems exact, and to cry down what is obviously inexact. No one, however, appre-

ciates the errors and inexactitude of instruments of precision more than those who work much with them. Medicine, we all know, in spite of great advances, is not a very exact science and is apt to remain so. Although when compared with psychology or with psychoanalysis it may seem extremely exact, yet it is very inexact compared with such sciences as mathematics, and even physics and chemistry. The thought I wish to emphasize is that correct diagnosis is the sum total of all the evidence at hand, and is not, as a rule, obtained from any one method of procedure, even when instruments of precision are employed. Instruments of precision are very desirable and at times very necessary, but thousands of correct diagnoses are made daily and hundreds of thousands of patients are healed without their employment.

## SUBJECTIVE CARDIAC SYMPTOMS AND THEIR INTERPRETATION\*

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We are all thoroughly familiar with the importance of heart disease as a cause of death and disability. For some twenty years heart disease has been the leading cause of death in the United States Registration Area, and in 1935 caused more than twice the number of deaths resulting from any other disease process. Moreover, when we add to the mortality ordinarily ascribed to heart disease the deaths from cerebral accidents, coronary disease and the closely associated condition of renal failure, we have a total exceeding the mortality from cancer, accidents, pneumonia and tuberculosis combined. In other words, cardiovascular diseases of one type or another are responsible for almost half of the deaths credited to the ten leading causes in the registration area. (1) This fact becomes increasingly significant as infant mortality is reduced, as the communicable diseases are brought under control, as cancer campaigns and the like bear their fruit and these conditions decrease in importance as causes of death. In a fashion, the more we are successful in controlling other mortality factors the more important becomes heart disease as a cause of death. The infants that formerly died in their crucial "second summers" now live on to acquire rheumatic fever, the adolescents who died of tuberculosis in former years now mature and develop endocarditis, the wives who are carried thru the perils of maternity and the husbands thru

typhoid, pneumonia and industrial dangers, now reach the age of degenerative heart disease. The craftier the surgeons become in combating malignancy, the better the results with sulfanilamide and its compounds, the safer the highways and the home and the shop are made, the more cardiac deaths we have in the long run. Heart disease, therefore, is a problem unlike the diminishing challenge of typhoid, tuberculosis and the exanthemata — and in many respects unlike the partly solved problems of pneumonia and cancer.

This is furthermore a personal affair with little or no public health aspect. No public campaigns as syphilis-control, accident prevention or malaria eradication can have any very significant effect on this problem. To quote a recent comment of Henry Christian's,

"Preventive medicine by its success has resulted in there being more sub-par, older people subject to the degenerative diseases that are non-preventable."<sup>1</sup>

The same idea is expressed by Piersol and Bortz when they state that today more people reach middle life than at any other time in the history of the world but having attained these later years, there is no significant increase in the span of life.<sup>2</sup> This is essentially then a question for the patient and physician to face together and therefore one whose early recognition is doubly important to us.

Furthermore anyone engaged in the practice of medicine from pediatrics to prostatic resection, from ophthalmology to orthopedics must at times concern himself with the heart either as a complication invading his specialty or as a confusing factor in differential diagnosis. No one of us can avoid the responsibility of a knowledge of the heart and circulation. The army surgeons discovered this during the last war when the differentiation of functional heart disease or D. A. H. from organic heart disease became of signal importance. Cabot in 1926 reported this problem as follows:

"In the early years of that conflict (1914-1918) large numbers of men were rejected, especially in England, because a systolic murmur was heard over the heart, a murmur often associated with pain, breathlessness, tachycardia, or something else which misled the examiner. Such exemptions became so frequent as to constitute a serious handicap to a country needing all her healthy young men in the crisis of war." He adds that "fortunately the mistake was discovered" and by the time America entered the war, the examiners profited by this English experience and in Cabot's opinion without bad results.<sup>3</sup> This confusion was clearly due to over emphasis on physical signs and lack of clear recognition of symptoms. No

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matter what specialty we espouse or what the age or condition of our patients, the heart is an ever present problem in disease. It is this early recognition by the family physician or the consultant in other fields that I hope to emphasize. If for no other reason we must be interested in heart disease and the symptoms by which it becomes manifest, because of the frequency with which it strikes our own profession. Medical men are apparently not only more subject than other people to heart disease as a cause of death but this mortality is increasing. In 1937, Morris Ginsberg estimated that about forty per cent of physicians' deaths in the United States were caused by heart disease, as compared to approximately twenty-four per cent in the general population.<sup>4</sup> If this tendency becomes more pronounced in the future, as is indicated by recent increases, it means that almost half of us present here today will eventually succumb to heart disease.

In reaching a diagnosis, whether in heart disease or other conditions, two types of data must be considered, first what the patient can tell us of his condition and second what we can determine thru our own senses and by instruments of precision. In the vast majority of cases the patient's complaint or recital of his symptoms is the primary lead we have to consider, the first indication we have of where to search for pathology. Without consideration of his symptoms or what he considers a deviation from normal it is conceivable that we could pass as entirely negative all physical and laboratory findings, give the patient a clean bill of health and send him home to a continued life of suffering from angina pectoris.

This is of course an exaggeration but it serves to emphasize the importance of subjective symptoms, an emphasis that is needed after the many years of concentration on physical findings and the modern tendency to assign undue importance to laboratory reports. I have often been consulted by other physicians who state the patient has symptoms of heart disease but they are loath to make the diagnosis because they find no murmurs, no irregularities or no hypertrophy. Conversely we are all familiar with the patient who has been treated with digitalis because of a murmur due to anemia or the patient who has been condemned as a cardiac cripple because of a few premature beats. Many patients carry organic murmurs for years or fibrillate for long periods without great disability and the nocturnal dyspnea or effort pain which should serve as warning signs of impending disaster are ignored because of unchanged physical findings. Any one who attempts electrocardiographic interpretations is familiar with the false sense of security often assumed after a negative

tracing is reported even though the patient has a typical history of angina.

There is no doubt that Laennec with his invention of the stethoscope and Auenbrugger thru the introduction of percussion inaugurated the modern era of diagnosis of diseases of the chest. The addition of the x-ray and the cardiograph added emphasis to the hypertrophied heart and clarified the irregular rhythms. The dramatic results in some cases from the use of digitalis, nitroglycerin, quinidine and the like continued to focus attention on these conditions. With no inclination to belittle this tendency toward exact pathological diagnosis it still seems to me that as so often happens the pendulum has swung too far. It is still proper to consider the patient rather than the disease. Is the patient aware of his fibrillation and bothered by it? Or is he in danger of congestive failure while unconscious of his irregularity? Or has he been told of his abnormality and since been living in possibly needless fear of sudden death? Auricular fibrillation is always a serious affair but often it cannot be interrupted and frequently the sufferer has years of fairly comfortable life ahead of him if he is properly managed. Interpretation of his subjective complaints, however, is often the turning point; are we to treat dyspnea, heart consciousness or unreasoning fear? Our ears, our fingers, our polygraphs and electrocardiographs tell us of the fibrillation and its rate and often its cause; but only the patient can tell us how it affects him.

A recent case of mine illustrates this point from a slightly different angle. A married woman of thirty-six came to me March 15 complaining of palpitation, dyspnea on exertion and weakness. She had had rheumatic fever twice and in 1937 when she first complained of these symptoms a diagnosis of mitral stenosis was made. She failed to improve, however, until another physician instituted treatment for anemia. On this she was well for about a year but omitted her medication and relapsed shortly before I saw her. Examination disclosed a moderately enlarged heart and a presystolic mitral murmur but also a very loud systolic murmur all over the heart and extreme pallor. Her hemoglobin turned out to be fifty-three per cent and her red blood count 3,800,000. On adequate iron therapy her blood is practically normal and with only a slight restriction of activities she is practically symptom free. Proper handling of this case, of course, hinged on complete physical examination and laboratory studies but the most important clue came from her clear realization that only anti-anemic therapy had relieved her symptoms. Also those symptoms, extreme palpitation, rather marked dyspnea on exertion, nervousness, weakness, etc., were not characteristic of the moder-

ate grade of rheumatic damage her heart had suffered. The proof secured by correcting a hypochromic anemia emphasized this.

A more frequent problem is the interpretation of transient irregularities or tachycardias which may be absent at examination but a source of much annoyance to the patient and in some cases even danger. Premature beats, one of the commonest causes of heart consciousness, are frequently abolished by the slight tachycardia and apprehension of coming to the office and being examined, only to recur when the patient relaxes after a meal or in bed. Paroxysmal tachycardia is a most elusive condition and if we make the diagnosis only on our observation of the cardiovascular system at the scant moments allowed us, the diagnosis will be a rare one. Adams-Stokes attacks are most often terminated by death or recovery before we can see the sufferer. Angina pectoris, unless we are to put the patient purposely through the ordeal of an attack, is nearly always recognized on history alone and even with the modern refinements of electrocardiography the diagnosis of coronary thrombosis in many cases must rest on history and clinical judgment, which after all is a combination of what we are told and what we see.

All these remarks are fundamental and their truth obvious and yet volumes are written on x-ray interpretation, electrocardiography and the like, and the student spends many weary hours mapping out cardiac outlines, timing murmurs and feeling for thrills, while history taking is described only in dry volumes concerned mainly with details of the patient's family and the ages at which he suffered from various exanthemata and the youngest member of the faculty or the staff teaches the student to take a history, most often practicing on a clinical subject inarticulate because of low intelligence or foreign language difficulties. Pendulums, whether actual or figurative, have a tendency to seek the middle ground but a gentle push in the right direction may hasten this happy compromise between ignoring the patient's story completely or listening too long to the neurotic.

In his text on heart disease, White expresses this idea decisively.

"The story of the very first appearance of the very first heart symptom should be the foundation stone on which the examination of the cardiac patient rests. One sentence accurately and adequately presenting this information may be more valuable than all the other data put together. An error or vagueness at the beginning may be seriously misleading. It is important to remember that not only may cardiac symptoms be confused with non-cardiac symptoms but even when cardiac symptoms, pain, dyspnea,

and palpitation are actually present they may be confused with each other, as in a case of paroxysmal tachycardia wrongly diagnosed angina pectoris because of hasty questioning."<sup>5</sup>

I have personally seen this mistake mentioned by White occur in the rush of a busy clinic, the patient with his limited experience using the word pain to describe the discomfort or palpitation of an attack of paroxysmal tachycardia and being subjected for some months to a futile line of treatment aimed at a supposed angina. Furthermore, I have had the privilege of watching Paul White question his new clinic patients regarding their complaints and his practice thoroughly follows his preachments. He repeats this advice even more forcibly in another chapter of his text.

"First and most important of all is the story of the patient. . . . It has been my custom in private practice to allow a full half hour and sometimes longer for the new patient's history, except in very simple or special cases. I am convinced that this time has been more profitably spent than that of any other part of the examination. Detailed and careful history taking is by no means the general rule. It is, to be sure, sometimes difficult or impossible in general practice, but even when possible, it is frequently neglected. . . . It is better to rely on an assistant's physical examination than on his history taking, if both cannot be accomplished by oneself."<sup>6</sup>

The recent growing interest in diseases of the coronary arteries and the apparent increase in frequency of angina and thrombosis has served to shift our attention from murmurs and hypertrophy to the symptom of pain. Pain is a significant symptom in heart disease just as it is in all pathological processes and one on whose subjective interpretation we must rely, except in rare cases where prostration, sweating and collapse add their evidence. Heberden described angina pectoris in 1768<sup>7</sup> and John Hunter added his personal description of the condition a few years later. For many years, of course, this included all types of heart pain. In 1912 Herrick wrote his masterly paper on coronary thrombosis.<sup>8</sup> In spite of the lapse of time since then much confusion still exists about precordial pain. The textbooks I used in medical school made no effort to distinguish between true angina pectoris and luetic aortitis. This was partly due to Allbutt's insistence at about that time that the pain arose in the first portion of the aorta.<sup>9</sup> The statement has been made that as late as 1923, Sir James Mackenzie did not make clinical diagnoses of coronary thrombosis.<sup>10</sup> Up to at least 1926 excellent texts on medicine failed to differentiate coronary thrombosis from angina.<sup>11</sup> This lack



of distinction is still evident in papers published today, and many of us who think clearly about murmurs, dyspnea, etc., are not able to analyze precordial pain in any rational way. The only way to do this apparently is to draw a sharp line between angina on one hand and coronary thrombosis or closure on the other. The fact that this distinction cannot always be made with certainty by clinical or even electrocardiographic means is no reason why we should not have a clear set of concepts regarding the two conditions. Often enough their symptoms are sufficiently characteristic for diagnosis and certainly the treatment and prognosis differ. When the border-line case occurs discretion would seem to indicate treating the condition as a thrombosis and giving a doubtful prognosis until the situation is clearer. With a better understanding of typical pictures in the two conditions, these uncertain cases will become less frequent.

There is a tendency in certain quarters recently to use the term angina of effort rather than angina pectoris.<sup>12</sup> Since the area involved is not necessarily the pectoral region it would seem wise to take the emphasis from the locus of the pain and put it on the effort or exertion which brings it on. This will immediately focus our attention on what is doubtless the most characteristic feature of angina. Sometimes excitement and occasionally over eating are the precipitating causes of an attack, but if these are viewed as leading to strain on the incompetent heart circulation, certainly effort on the part of the heart, if not effort on the part of the individual is a typical part of the syndrome. The patient very early realizes this and learns that the quickest way to secure relief is to stop dead in his tracks until the pain eases. Often he can tell us this and the history is significant. In the early stages at any rate there is no question this relaxation of the strain on the myocardium gives more prompt relief than the nitrites. Later nitroglycerin under the tongue or some of its substitutes become necessary and again the patient's report of the effect of this medication will help us in our diagnosis. While theoretically the nitrites will relax spasm of the biliary tract and morphine will increase this spasm,<sup>13,14</sup> in actual practice the patient with gall stones is most likely to require an opiate for adequate relief while angina will almost invariably respond to the nitrites alone. In fact, some authorities think that precordial pain not relieved by nitrites is adequate proof of occlusion of at least a small branch of the coronaries.<sup>15</sup>

John Parkinson is fond of quoting a phrase of Mackenzie's that "The heart can't remember" thus emphasizing the immediate appearance of pain on exertion.<sup>16</sup> This may be an important point in differentiating the neurotic who complains of chest

pain the evening after exertion or for some days following extra activity. Parkinson also makes it a point to ask his patients if they have the heart pain at the moment of questioning and when the answer is yes his presumption is very much against angina. In other words a patient with true angina of effort is not going cheerfully thru a clinical investigation.

In addition to the precipitating cause and the response to nitrites the patient is the only one who can give us the invaluable information as to where the pain is located, how it radiates, how long it lasts, and what kind of pain it is. While these factors all vary and are open to the criticism that they are subject to interpretation by the patient, they are generally sufficient to suggest or even determine the diagnosis.

The location of cardiac pain is usually altho not always characteristic and this fortunately is retrosternal rather than where the patient envisions his heart. While I have kept no statistics on the subject I am confident that the number of patients is negligible who have heart disease and who complain of heart pain -- really pain in the left submammary region. This simple fact is too often ignored by physicians who should know the location of the heart or who could learn it in a moment by x-ray. The radiation of this pain is not as characteristic as we would like to believe. For every patient with the textbook picture of radiation to the left shoulder and arm we have another who complains of spread to the neck, the jaw or both arms or who may have no radiation whatever. Furthermore, the so-called "typical angina" consisting of precordial pain with radiation to the left shoulder and down the left arm is a matter of public knowledge and tends to be imitated by every hysterical patient with pain from whatever source in this immediate neighborhood. To my notion the substernal origin of the pain is of far more significance than its radiation.

The duration of anginal pain serves as a good differential point both from the pain of thrombosis and non-cardiac pain. Most authorities agree that its limit in angina is ordinarily five or ten minutes and while the patient naturally exaggerates the length of this very unhappy period, he soon learns to recognize the fact that it actually occupies a rather short space of time. The patient complaining of hours or days of pain has either coronary closure or some type of pain best not included in the term angina pectoris.

The type or kind of pain as described by the patient will of course vary tremendously but will usually correspond to constricting, crushing, vise-like characteristics. Often he will agree it is like a rope around the chest pulled tighter and tighter.

This last factor, of course, will not help to differentiate coronary thrombosis from angina, since except in degree and duration they are essentially the

same. For this distinction the prolongation of the pain into hours or even days, the onset more often when quiet and the failure of nitrites to relieve are the best indications of a coronary accident. Not all writers are agreed on the relationship of coronary thrombosis to activity, and at present there is a controversy raging in the *Journal of the American Medical Association*<sup>17,18</sup> regarding this point. Personally, I am inclined to agree with Parkinson who says "The best way to get a coronary thrombosis is to go quietly to bed and go to sleep."<sup>16</sup> Wahl also discussed this problem very competently from a pathological point of view a number of years ago and reached the conclusion that thrombi were more often formed in periods of quiet with lessened circulation.<sup>19</sup>

In summary then, omitting controversial points, this all important subject sums up as follows. Angina of effort is a moderate to excruciating pain of constricting type, appearing at the time of activity, most often retro-sternal and tending to radiate upward and outward, and relieved in a matter of minutes by rest or nitroglycerin. Coronary occlusion is a similar but usually more severe type of pain, coming on more often while the subject is at rest, lasting much longer and not responding to rest or nitrites. This emphasis on subjective symptoms is by no means an attempt to belittle the importance of physical and laboratory findings, especially the fever, leucocytosis, cardiographic changes and the like, but may serve as a guide in distinguishing characteristic attacks of either condition when they must be recognized from the history alone. Certain other symptoms such as vomiting, sweating, collapse, dyspnea and the like which are usually present with thrombosis and absent with angina have not been emphasized because their significance is more generally recognized.<sup>20</sup> Furthermore the apprehension of death or "angor animi" so much stressed in the past has not been mentioned because it appears to be a mental state occurring as often with supposed heart disease as with the actuality.

This attempt at distinction of the two disturbances of coronary circulation must also include an explanation of the pain that falls in neither group. Limitations of time make it necessary merely to name a few of the more important such as cardiovascular syphilis, neurocirculatory asthenia, pericarditis, myocardial incompetence from prolonged tachycardia, etc. Most of these conditions are obvious or will become so after study but the frequent occurrence of vague heart pain in functional cases cannot be too much emphasized. In a study of psychoneuroses in general, Flynn found sixty per cent of his cases complaining of precordial discomfort and an even greater number with tachycardia and dyspnea.<sup>21</sup>

Nearly all writers on neurocirculatory asthenia emphasize this vague heart consciousness or distress<sup>22</sup> and Campbell and Elliott have recently given an excellent description of it in paroxysmal tachycardia.<sup>23</sup> In nearly all such cases the discomfort referred to the precordium will be found to differ sharply from true angina or coronary thrombosis and quite naturally this is an important distinction.

The differentiation of organic pain from other sources, especially below the diaphragm is another and more difficult question. For years the argument has waged pro and con over the importance of biliary disease in the production of anginoid pain and the significance of coronary disease in the causation of epigastric distress. References in the literature date back to 1907 and 1909 on this question and still it is not settled.<sup>13</sup> Obviously after so long a period and with so much evidence on both sides the answer lies in some compromise. Waltman Walters expressed this adequately and conservatively from the point of view of the surgeon in 1938.

"In my opinion there has been gross exaggeration of the risk of operative procedures in cases of angina pectoris and even in cases in which coronary thrombosis previously has occurred. In addition the fact has been overlooked that a badly diseased gallbladder may produce pain, referred to the substernal and precordial regions; this pain may lead to the erroneous diagnosis of angina pectoris and the patient may be denied operation. It has been shown by Fitz-Hugh and others that in cases of angina pectoris removal of the diseased gall bladder has had a marked beneficial effect on the patient's cardiac condition. Fitz-Hugh has been able to prove this effect by the improvement in the appearance of the electrocardiographic tracing subsequent to operation."<sup>24</sup>

How far we should go in cleaning up gall bladders in confused cases or even in clear-cut angina is a matter to be decided in each individual case and as a matter of therapeutics is foreign to the present discussion. However, adequate diagnosis of both pathological processes, should enable us to clarify the two factors to some extent. And again, the patient's story must be evaluated hand in hand with the technical procedures such as cholecystography. I have never heard a gall bladder patient complain of exertion bringing on his attacks, nor is the average sufferer from colic inclined to remain motionless to secure relief. On the contrary, I have one patient who suffers periodic attacks of colic who has volunteered the information that cramped inaction over a card table or the wheel of his car following a meal will bring on an attack. Fitz-Hugh and Woolferth in this country<sup>25</sup> and Cotton in England<sup>26</sup> are inclined to



emphasize this inter-relationship of biliary tract and coronary circulation but I believe the majority opinion will subscribe to some such commonsense interpretation as Walters'.

The respiratory tract as would be expected furnishes many of our most reliable symptoms of cardiac disease, but again we can be misled by obesity, anemia, latent infections and of course hysteria. In spite of these exceptions I still think the onset of dyspnea on exertion is the most valuable symptom the patient can report. When stairs previously climbed with ease, jobs formerly done without difficulty or any activity to which the patient is accustomed, cause shortness of breath before they cause fatigue, cardiac disorders are certainly to be ruled out first of all. This questioning must of course be done intelligently. The man who tries to play tennis after five years at the desk and the dinner table will naturally be dyspneic. Individuals who are not used to stairs or accustomed to only one flight can expect to puff when they are faced with two or three steep flights on a visit to town or when the elevator breaks down. Sudden increase in weight or even gradual gain in weight, where some infrequently performed or seasonal activity is concerned, will cause dyspnea. This is especially marked with abdominal distention as occurs in pregnancy or non-cardiac ascites.

Anemia is probably the commonest source of error in this regard as the abnormal strain thrown on the normal heart of an anemic individual can exactly mimic the symptoms produced in an abnormal heart by a normal strain. This differentiation is relatively simple if we keep our eyes open and do not allow ourselves to be further misled by the systolic murmur of anemia.

True dyspnea which can be easily described or even demonstrated to the patient must be sharply distinguished from the sighing respiration which seems to be standard equipment in every case of cardiac neurosis. The patient will do his best to report this as shortness of breath but nine out of ten neurotics when questioned will admit it or recognize it as an effort to get an extra-deep inspiration or as a feeling they "can't get enough air into the lungs." This distinction in my opinion cannot be too much emphasized since the sighing respiration, once the story can be elicited, is almost pathognomonic of effort syndrome or cardiac neurosis, while it serves almost equally well to exclude true heart failure.

Orthopnea is sometimes a confusing term and is often used to include spells of nocturnal dyspnea as well as the inability to lie flat in bed. I have made it a practice to ask how many pillows the patient sleeps with and how this compares with his practice in the past and also to ask if he ever has attacks of breath-

lessness at night. The psychoneurotic may claim inability to lie flat or even to recline at all during an attack but is rarely really orthopneic or a sufferer from nocturnal paroxysms of dyspnea. I believe also there is a different significance in true cardiac disease in the patient who constantly props himself semi-erect and then sleeps well and the patient who sleeps well lying flat part of the night and then awakens suddenly out of breath. The latter, I believe, is more liable to progress to pulmonary edema and has a more doubtful prognosis.

The associated symptoms recognizable in heart disease, and especially congestive failure, are legion. Most of them unfortunately are complained of likewise by the neurotic or the sufferer from other conditions. Edema, ascites, hydrothorax and the like are signs which the patient may recognize or call to our attention. To assume without study that any of these congestive features are due to heart failure is of course to overlook the peritoneal irritation, cirrhosis, nephritis, or what not that may equally well cause fluid to collect. The patient's statement therefore, that he has had to let his belt out three notches or that he is unable to lace his shoes must be interpreted merely as swelling of these respective parts of his body and not as heart disease unless the rest of his story and the result of our examination indicate heart failure. Puffiness of the ankles at night which should be one of our most valuable symptoms of early congestive failure and one we must often depend on the patient's reporting to us, is for some reason one of the most unreliable of symptoms. The patient who denies it will often be found to have demonstrable edema even if examined at ten a.m. and the many who claim their feet swell regularly can never be found having the least real pitting edema.

Passive congestion of the gastro-intestinal tract and biliary tract can often be surmised by the patient's description of digestive failure, "biliousness" and the like. In a surprising number of cases, early congestive failure manifests itself in this fashion.

I have purposely omitted the phenomenon of fainting since I have never felt it had a place as a cardinal indication of heart disease. The public places it high on the list and I would judge from my patients' stories, many of the old-time practitioners confused vasomotor instability with true heart disease. Certainly, most of those individuals who have enjoyed or profited by "weak hearts" thru a long period of years, name fainting as one of the complaints on which the old family doctor based his diagnosis. With the rare exception of Adams-Stokes attacks, I know of no heart condition in which fainting is of any significance. Certain men consider it of frequent occurrence in uncomplicated

aortic stenosis but even that condition is not a common one in general practice.

Some medical terms are retained long after they have outlived their usefulness. The expression, palpitation, is an example of this. Webster defines palpitation as rapid pulsation or throbbing and Dorland as rapid beating of the heart. If the term could be limited to this restricted meaning it would be a valuable one. However, it has come to mean not only a fast heart but an irregular heart, a hard beat or a beat the patient is conscious of. Taken altogether it has become a worthless expression and the simple statement of palpitation without elaboration from the patient is more liable to mislead than help us. I have formed the habit of asking the patient if he is conscious of his heart beat. If the answer is yes, I then try to find out if it is hard beating, rapid beating or irregularity he is aware of. It is surprising how much the average patient is able to help us in this regard. Often auricular fibrillation will be present without the patient knowing the rhythm is irregular, but he will almost always know something is wrong with the heart, and since even paroxysmal fibrillation usually lasts some little time there is ordinarily an opportunity to check up on this condition. Ectopic beats can usually be graphically described by the patient as occasional irregularities, "flopping beats" or the classical term of the "heart seeming to turn over." I have often used this possibly suggestive term in questioning and as a rule when the patient enthusiastically agrees that this describes his condition he turns out on examination to have premature beats.

The all important history of paroxysmal tachycardia—all important because it is probably the most elusive condition we have to recognize—is more difficult to secure. The patient can generally describe the abrupt onset often coming after a meal or accompanied by abdominal distention, but this sudden change may also represent paroxysmal fibrillation or even ectopic beats at times. The abrupt offset may be overlooked partly because the patient has become partially adjusted to the high rate and partly because the exhaustion and fatigue persist after the attack itself has ceased. However, there is usually a definite point at which the patient realizes the tachycardia is over. Patients who have had considerable experience with this condition, as most of mine seem to have, learn to describe its onset, course and cessation fairly accurately. The greatest difficulty is differentiating a true paroxysm from a sinus tachycardia, and often here an analysis of the entire make-up of the patient will help. Paroxysmal tachycardia comes as a rule in reasonably healthy people with stable nervous systems, whereas severe attacks of simple tachycardia occur nearly always in the neu-

rotic individual or one suffering from some extra-cardiac disease which is often recognizable. These psychoneurotics are very prone to count their pulses and when a description includes the information that the pulse rate was 120 or 130 we can be reasonably sure of a simple tachycardia even though this was taken at the wrist. The sufferer from paroxysmal tachycardia as a rule is not particularly concerned about his rate and even if he tries he is unable or count it at 160 or 180 to the minute. Another worthwhile point for interrogation is whether the fatigue and lassitude preceded or followed the onset of tachycardia. The well-balanced person suffering from paroxysmal tachycardia feels well until after the high rate has persisted for some time when he may develop heart pain, faintness, nausea and even collapse. Any preceding symptoms are almost certain to be gastro-intestinal. The true cardiac neurosis on the other hand develops tachycardia only after faintness, weakness, vertigo or some of his other countless complaints have inaugurated the attack.

Even though this discussion has been limited to subjective cardiac symptoms it has been necessary to survey practically the whole field of heart disease, and necessarily this has been done in a summary and didactic manner. If, however, it has brought out the importance of the patient's story in our analysis of his trouble, if we have turned the spotlight for even a few moments from physical signs to subjective symptoms, perhaps we have come somewhat closer to the happy balance of emphasis that should be our ideal.

## BIBLIOGRAPHY

1. Christian, Henry A. Some Limitations in Preventive Medicine. *Annals Int. Med.* 12:1499, March, 1939.
2. Piersol, George Morris, and Bortz, E. L. The Aging Process; A Medical-Social Problem. *Annals Int. Med.* 12:964, Jan., 1939.
3. Cabot, Richard C. Facts on the Heart. Philadelphia, W. B. Saunders Co. 1926, P. 290.
4. Ginsberg, A. M. The Doctor's Heart. *K. C. Med. Jour.* XIII: 5:15, May, 1937.
5. White, Paul Dudley. Heart Disease. New York, The MacMillan Co., 2nd Ed., 1937, P. 8.
6. *Ibid.* Page 2.
7. Heberden, Wm. Pectoris Dolor. London 1802 quoted by White.
8. Herrick, J. B. Clinical Features of Sudden Obstruction of the Coronary Arteries. *Jour. A. M. A.* LIX, 2015, 1912, quoted by White.
9. Osler and McCrae. New York, Appleton & Co. 9th Ed., 1923.
10. Hall, G. E. Experimental Heart Disease. *Annals Int. Med.* 12:907, Jan., 1939.
11. Greene, C. L. Medical Diagnosis P. Blakiston's Sons. Philadelphia, 1926.
12. Conferences on Therapy-II Treatment of Coronary Disease *Jour. A.M.A.* 111:2482, Dec. 31, 1938.
13. Walters, W., McGowan, J. M., Butsch, W. L., and Knepper, P. A. The Pathologic Physiology of the Common Bile Duct. *Jour. A.M.A.* 109:1591, Nov. 13, 1937.
14. Swalm, W. A., and Morrison, L. M. Relation of Gastrointestinal Disorders to Angina Pectoris and Other Acute Cardiac Conditions. *Rev. of Gastroenterology* 6:41 Jan.-Feb. 1939.
15. Gold, Harry. Drug Therapy in Coronary Disease *Jour. A.M.A.* 112:1 Jan. 7, 1939.
16. Personal Communication.
17. Paterson, J. C. Relation of Physical Exertion and Emotion to Precipitation of Coronary Thrombosis *Jour. A.M.A.* 112:895 Mar. 11, 1939.
18. Correspondence. *Jour. A.M.A.* 112:1620 Apr. 22, 1939.
19. Wahl, H. R. Coronary Occlusion. *Bull. Univ. Kan. Sch. of Med.* III:3:9 Jan. 1933.
20. Ballinger, W. M. Low Chest and Upper Abdominal Pain. *Ann. Int. Med.* 12:1223 Feb. 1939.



21. Flynn, J. M. Somatic Phenomena in Psychoneuroses. *Am. J. Med. Sc.* 193:548 April 1937.
22. Ginsberg, A. M. Differential Diagnosis of Primary Hyperthyroidism, Incipient Tuberculosis and Neuro-Circulatory Asthenia. *K. C. Med. J.* XIV:1:13.
23. Campbell, M., and Elliott, G. A. Paroxysmal Tachycardia. *Brit. Ht. Jour.* 2:123 April 1939.
24. Walters, Waltman. Lesions of the Extra-hepatic Biliary Tract. *Jour. A.M.A.* 111:2477 Dec. 31, 1938.
25. Fitz-Hugh, Thos., and Woolferth, C. C. Cardiac Improvement Following Gallbladder Surgery. *Ann. Surg.* 101:478. Jan. 1935. Quoted by Walters.
26. Personal Communication.

## SUPERFICIAL CANCER— SKIN AND LIP

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In treating superficial cancer I use radiation, either x-ray or radium, in nearly all cases. Sometimes a radio-resistant tumor is also treated by electro-surgical methods.

Radiation offers many advantages over surgical methods in the treatment of superficial cancer, as it can destroy the cancer in many locations where it would be impossible to do so by surgical means, and even where surgery could result in a cure, in many cases there would be an undesirable deformity as a result.

This fact is well illustrated in Case I. In this patient the cancer had invaded the tissues between and around the spinous processes of his cervical vertebrae—an impossible surgical problem.

This is also well illustrated in Case II. Here the carcinoma was fixed to the bone and offered no

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hope of surgical removal without a very mutilating operation, consisting of the removal of the lower margin of the orbit and front wall of the maxillary sinus with the overlying soft parts. With radiation there has been perfect healing, although it is too early to pronounce it permanent.

Case III, where the tip of the nose was destroyed by cancer and paste treatment, healed after radiation, and has remained so for fifteen years. While it is not a perfect cosmetic result, it gives a useful nose. To approach or improve on this result by surgery would require a series of delicate plastic operations, and western Kansas is not over-crowded with plastic surgeons.

Basal cell carcinoma of the skin is the most common cancer of the skin and is very sensitive to Gamma or x-rays. I usually treat it with radium screened with 0.3 mm. platinum and 1 mm. brass, at 1.5 cm. distance, giving a dose of 960 milligram hours at the first treatment; at six and twelve weeks, subsequent treatments are given, using one-half the dose.

Under this plan of treatment nearly all small basal cell cancers are cured. Prickle cell carcinomata, when small, are also eradicated by the treatment. When larger and more infiltrating, I prefer to use 200 K. V. x-ray, with a heavy composition filter, giving a total dose of 4500 "r," at the rate of 200 "r" per day. This gives a rather severe skin reaction,—the skin becomes a fiery red, and by the time the treatment is finished the superficial layer of epithelium is desquamated, leaving a moist surface. In six weeks the skin has recovered and leaves a smooth, supple scar.



Case 1A—April 12, 1936



Case 1B—July 10, 1936



Case 1C—April 20, 1938





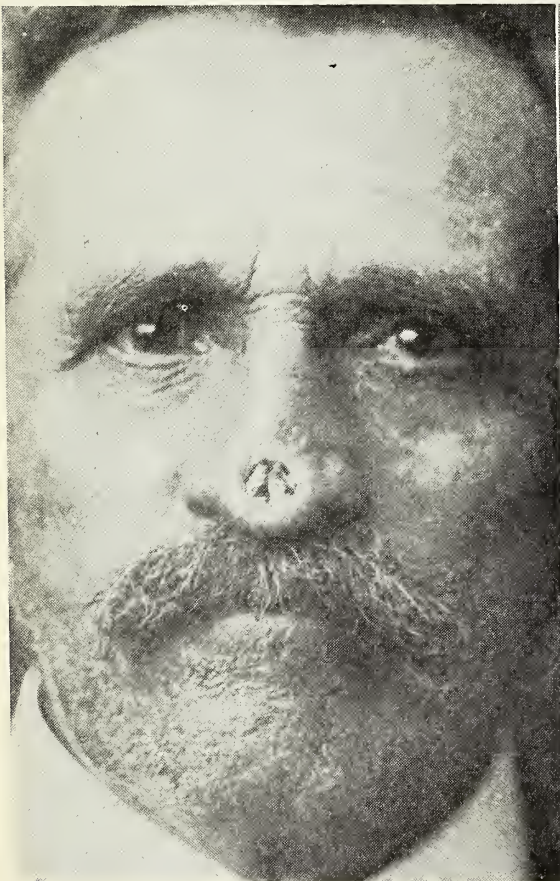
Case 2A—September 29, 1938



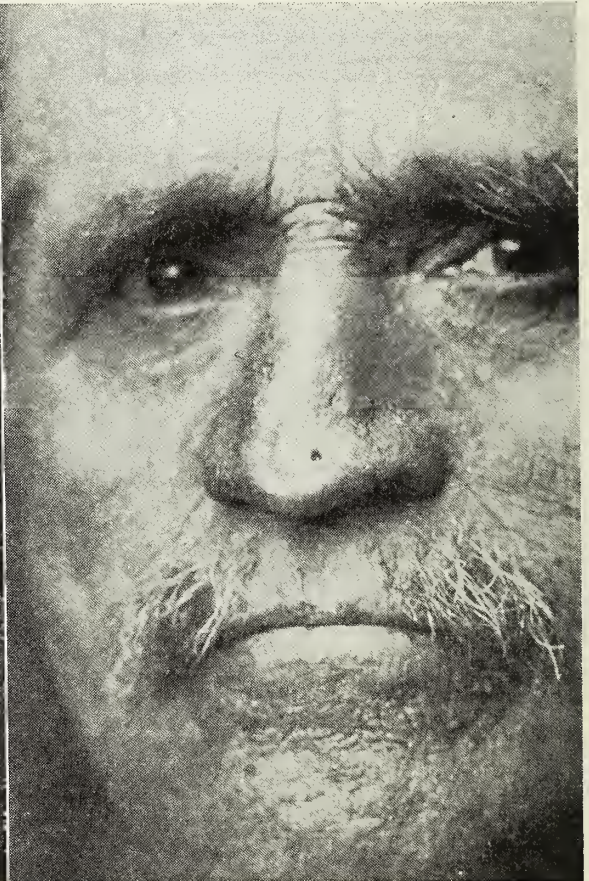
Case 2B—March 15, 1939

Cancer of the lower lip is the most serious of the common superficial cancers. It accounts for about five per cent of the cancer deaths in men. When treated early, a high per cent of cures is obtained. Our difficulties come when the patient postpones seeking treatment until the lesion has become

extensive or has invaded the lymph glands of the neck, or has had ineffective treatment. I frequently see cases of cancer of the lip which have previously been treated by a surgeon who, whether using the scalpel or electro-surgical methods, was torn between two desires: one, he wished to produce as



Case 3A—May 12, 1924



Case 3B—June 28, 1924



little mutilation as possible; two, he wished to remove all the cancer. In making a compromise he was too conservative, and did not remove all the malignant tissue, and the patient returns later with a recurrence. Radiation has a great advantage over surgery in that it can destroy cancer over a wide area without destruction of the normal tissue.

A case in point is Case IV where the cancer had destroyed the lower lip and invaded all of the front of the chin. It would be a very optimistic surgeon who would hope to obtain a cure by a lesser operation than resection of the lower jaw.

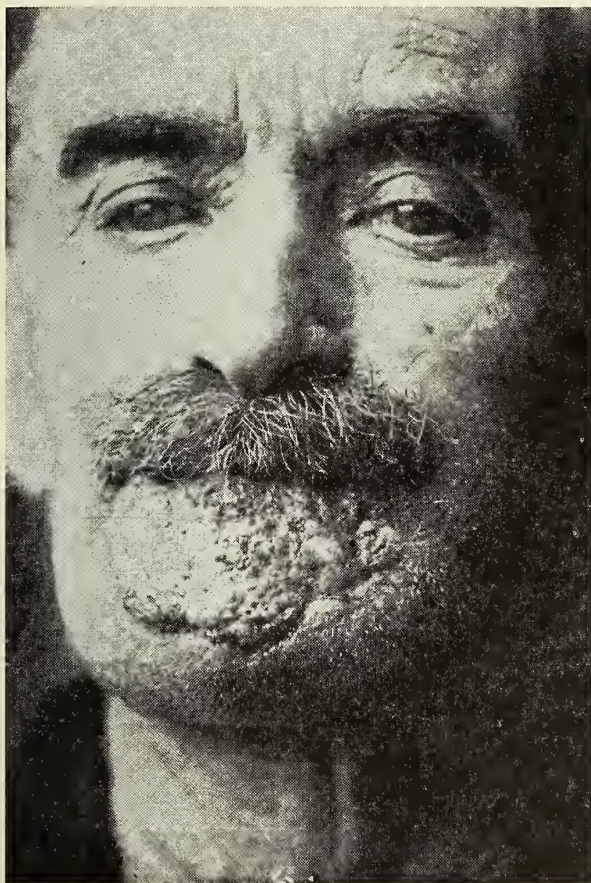
Our usual treatment for cancer of the lip is as follows: Two 10-mg. radium needles and two 12½-mg. radium needles are placed around the edge of a piece of lead 2 mm. thick and 1½ in. square. This is placed on a block of balsa wood 1 cm. thick and taped over the lesion for forty-eight hours. Two subsequent treatments of twenty-four hours are given at six-weeks intervals. This produces a sharp reaction, with some blistering of the skin, and causes a reaction on the gums, consisting of the formation of a white membrane on the labial sur-

face of the gums. Occasionally one meets with a cancer of the lip that resists this treatment. In these cases I bury 1-mg. radium needles, screened with 0.5 mg. of platinum, at intervals of 1 cm., and leave them in place for one week. This seldom fails to eradicate the remaining malignant cells. This procedure is especially useful in lesions at the corner of the mouth.

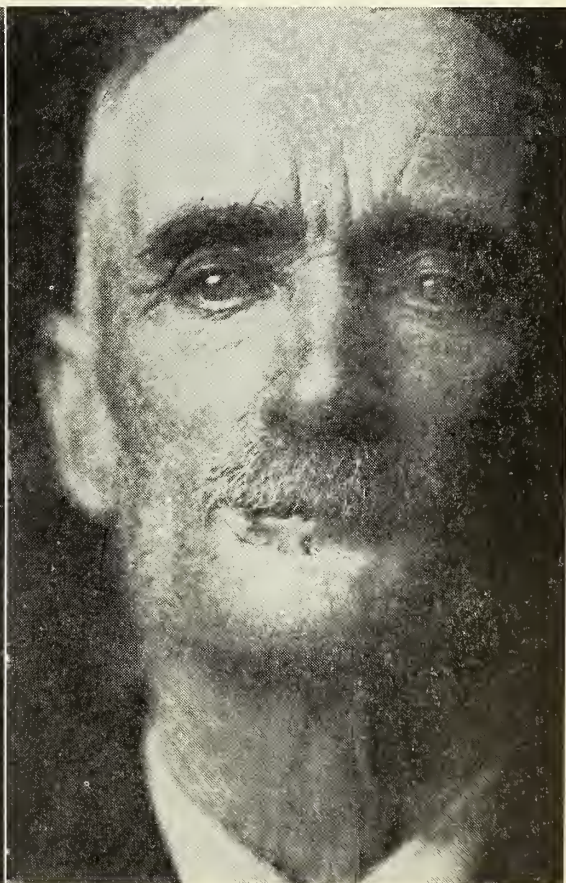
#### METASTASIS TO THE GLANDS

There is no agreement on how to treat the glands of the neck. Some advocate a block dissection of the glands of the neck in every case. Some advocate deep x-ray over the neck in every case. Some advocate treating the local lesion and not treating the glands unless they are palpable, or until metastasis is noted. It seems to me the method of treatment advocated by various students of cancer of the lip seems to depend on the class of patients they are treating. Most of the men working in large charity clinics recommend the treatment of the neck glands in every case, while men working with intelligent, private patients have a more flexible rule.

In a questionnaire recently sent out by the Cancer



Case 4A—December 26, 1933



Case 4B—April 23, 1934



Committee of the California Medical Society, one-third of the correspondents advised immediate treatment of the neck in all cases. Two-thirds recommended treatment only when glands were palpable.

In my group of lip cancers I do not feel justified in doing a routine block dissection or heavy prophylactic radiation of the neck, but reserve them for those cases when there are palpable glands, a later metastasis, or extensive primary cases.

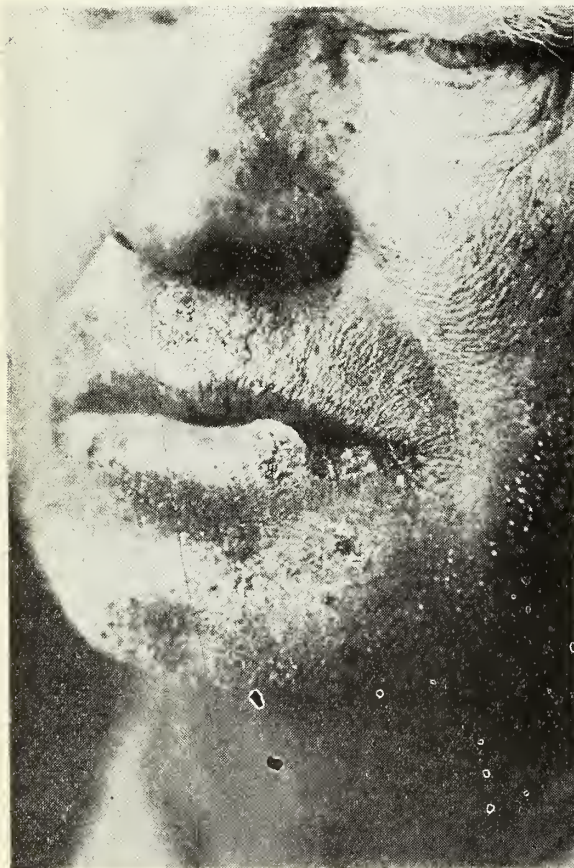
The results of our treatment of cancer of the lip are shown in the following tabulations:

CANCER OF LIP PATIENTS													69
1921-1930													
Patients living and well—													37
5 yrs.	6 yrs.	7 yrs.	8 yrs.	9 yrs.	10 yrs.	11 yrs.	12 yrs.	13 yrs.	14 yrs.				
7	5	4	3	4	5	5	2	1	1				
Patients dead of some other disease—													10
2 yrs.		4 yrs.			5 yrs.								
1 mental disease 1 heart disease 2-1 pneumonia; 1 cerebral hemorrhage													
6 yrs.		7 yrs.		8 yrs.									
1 apoplexy 1 apoplexy 3-1 heart disease; 1 accident; 1 cerebral hemorrhage													
10 yrs.													
1 cardiac lesion													
Patients living with the disease—													4
6 yrs.		7 yrs.		12 yrs.									
2		1		1									
Patients died of cancer of the lip													7

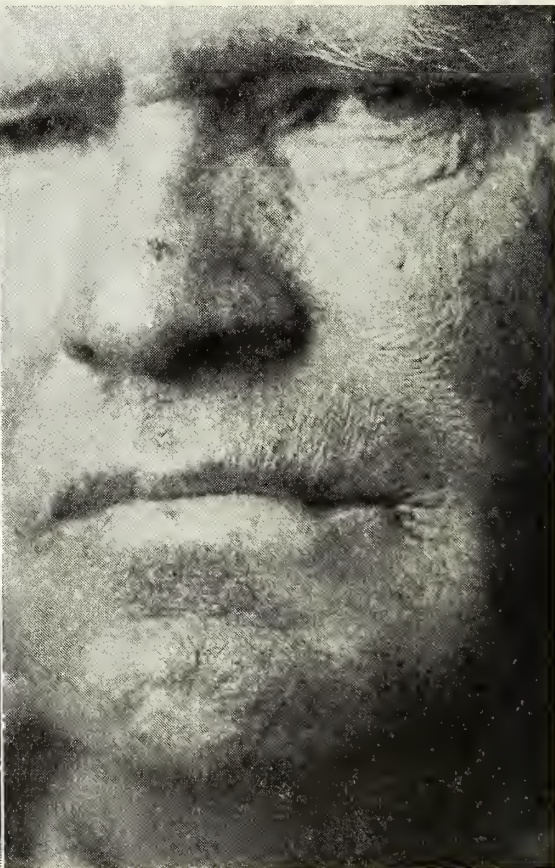
1 yrs.	2 yrs.		
3	2	—one patient had various treatments for sometime before treatment was started; one patient had ca. 5 yrs. before treatment	
4 yrs.	6 yrs.		
1	1		
Patients dying of cancer other than the lip		3	
1 yr.	8 yrs.	10 yrs.	
1 cancer of stomach	1 cancer of prostate	1 cancer of stomach	
Patients untraced—		8	
8.7 per cent—Patients dying of cancer of lip in 5 or less years.			
5.8 per cent—Patients living more than 5 yrs. with recurrence.			
1.5 per cent—Patients dying of cancer of the lip after five years.			
11.6 per cent—Patients untraced.			
2.9 per cent—Patients dying of some other disease less than five years.			
11.6 per cent—Patients dying of some other disease after five years.			
4.3 per cent—Patients dying of cancer other than the lip.			
54.0 per cent—Patients living and well.			
Five year survivals from all deaths—88.5 per cent counting all untraced patients as well;			
78.0 per cent counting all untraced patients as dead.			
Five year survivals from cancer of lip—91.3 per cent counting all untraced patients as well;			
80.0 per cent counting all untraced patients as dead of ca. of lip.			
Five year survivals free from cancer of lip—84.0 per cent counting all untraced patients well.			
5 to 17 years			
72.5 per cent counting all untraced patients dead.			

Case I—E. S.

Patient was first seen April 12, 1936. He gave a history of having a carbuncle on the back of his neck in 1929. The lesion would not heal and kept breaking down. In August, 1934, it began to spread



Case 5A—August 29, 1923



Case 5B—November 6, 1923



and spread continuously. At the time he was first seen he had a large ulcer on the back of his neck that measured 9 x 10 cm. The surface of the ulcer was covered with a gray, sloughing surface with a few pale granulations that were visible. It had raised, hard edges. Biopsy was taken from the edge and proved to be an epidermoid carcinoma.

Patient was given a series of nineteen x-ray treatments with the following factors: 200 K. V.—20 ma.—50 cm. distance—filter: .4 mm. tin, .25 mm. copper, 1 mm. aluminum—on the back of the neck for ten minutes. This gave an output of 237 "r." These treatments were given daily, excepting Sunday. After this treatment the wound cleaned up and gradually decreased in size until November 16, when he returned with the wound all looking clean except the lower part of it. At that time ten 1-mg. radium needles screened through .5 mm. of platinum were inserted around the lower part of the wound. From then on the wound gradually closed. At the present time, there is no evidence of cancer. The patient is now carrying on his occupation as an oil driller.

#### Case II—R. C. H.

Patient was seen first September 29, 1938. He had an epithelioma on the left cheek that came on about ten years ago. It began growing faster in the spring of 1938, and he had it treated with caustic paste.

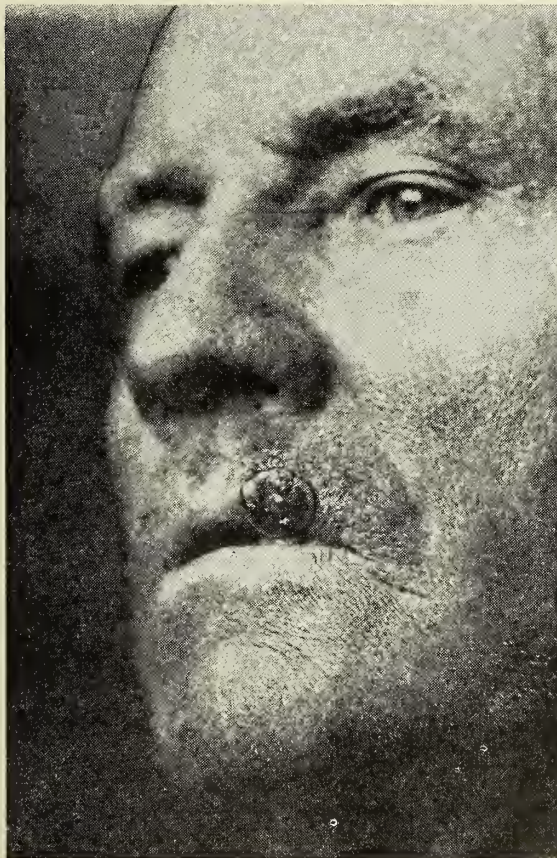
The lesion when first seen was a thickened, raised lesion and was ulcerated in the center. The ulcer measured  $4\frac{1}{2}$  x 3 cm. and was surrounded by an indurated area measuring  $7\frac{1}{2}$  x 3 cm. It was fixed to the deep structures. Patient was given a series of twenty-one x-ray treatments of the following factors: 200 K. V.—20 ma.—50 cm. distance—10 x 10 port-filter: 1.25 tin; .25 copper. 1 mm. aluminum—left cheek—25 minutes—202 "r."

The lesion began to heal as soon as the reaction from the radiation subsided and when last seen January 10, 1939, the lesion was entirely healed. There was a depression at the site of the cancer and a little edema just under the eye.

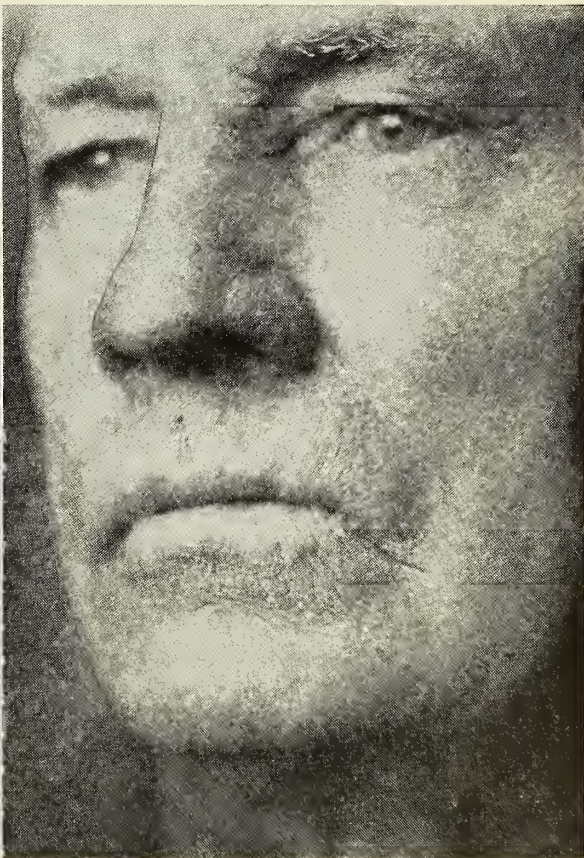
#### Case III—C. S.

Patient was seen May 12, 1924, with a cancer on

(Continued on Page 430)



Case 6A—November 7, 1924



Case 6B—March 1937



## PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

Since our last communication we have had the opportunity to meet the chairmen of the various State Society Committees. This meeting was held at the Jayhawk Hotel in Topeka, September 10. It was a very excellent meeting, everyone showing great interest. Several of the committees were able to report having already had their first meeting and having adopted a program. In one or two instances the work was very well started. All of this is very encouraging.

This marks the beginning of the season of professional activities for the various component societies. It is the rather natural time to begin any contemplated postgraduate work. In our committee set-ups there is ample opportunity for any county or district society to secure aid along this line from any one of several of the State Society Committees. The committee on heart disease, the committee on tuberculosis, the committee on scientific work, the committee on venereal disease, the committee on cancer control, each of these committees is prepared to aid any county or district society. I trust that the next several months will be a period of very active postgraduate work.

There is one effort at cooperation between the profession and the women's organizations of the state to which I would like to call your attention. The Kansas Federation of Women's Clubs has officially endorsed the work of the Women's Field Army. The Kansas Medical Society has also endorsed this work and has assured the Women's Field Army of the willingness of our organization to cooperate with them in their educational campaign. Undoubtedly many county societies will be receiving requests from either the Women's Field Army or the county units of the Federation of Women's Clubs to furnish the program for a cancer meeting. I would urge that each county society anticipate such an invitation by designating some individual, or committee, to cooperate in this worthy educational undertaking. Remember, the central office will furnish information packets to aid anyone in the preparation of such a program.

The care of the indigent of each community continues to be an important problem. Our economics committee and our central office are constantly in touch with the Kansas State Board of Social Welfare and Social Security Board in an effort to work out this problem and we trust that each county society will be awake to the problem and willing to do its best to work with the public authorities toward a solution of the problem. The central office or economics committee are glad to supply information to any of the county societies or to aid any county society in any way they can.

With our committees all at work and component societies resuming their regular meetings, it marks the beginning of a well rounded program. I wish for each committee and each component society a successful season of activity.

Yours very truly,

C. C. Nesselrode, President



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## EDITORIAL

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### PROTAMINE ZINC INSULIN

Protamine zinc insulin has now been used for the control of diabetes mellitus for over three years and has definitely proved to be a valuable contribution to medicine. Some physicians used the new insulin compound with the reckless indifference of a taxicab driver rounding a busy corner and concluded that it was of no value. Others who carefully studied its properties have assigned to it a definite but limited value. Its chief advantages are decreased in the number of injections and a prolonged action with less violent fluctuations of the blood sugar level. The chief disadvantages have been the tendency to diurnal hyperglycemia with glycosuria and nocturnal hypoglycemia. Hypoglycemic reactions are very much more severe than with the old insulin and more difficult to manage.

Most of the students of diabetes have concluded that protamine zinc insulin should be used to control the diabetic through the night and that its effect is determined by the fasting urine on the following morning. Any daytime glycosuria requires supplementary doses of regular insulin. One should never increase the morning dose of protamine zinc insulin if the fasting morning urine sugar test is negative for that will produce nocturnal hypoglycemia with unpleasant reactions.

The combined use of the two insulins is necessary in the more severe cases, and the patient still requires as many injections as with the old insulin alone. He is however, under a more constant regulation. Always regulate with old insulin, then switch to the protamine compound.

Pollack and Dolger<sup>1</sup> have made some very practical dietary suggestions which have enabled them to control most diabetics with one morning injection of protamine zinc insulin without the necessity of daytime doses of old insulin. The diet consists of carbohydrate 150 grams, protein eighty to one hundred grams, and fat sufficient to fit the caloric requirement. The total carbohydrate is divided to allow one-fifth for breakfast and two-fifths each for

lunch and supper. At least one-half the total protein is given at supper in order that there be a prolonged source of carbohydrate (from the protein) for six to eight hours after the evening meal. Many hospitals serve meals at eight a.m., eleven-thirty a.m., and four-thirty p.m. and then leave a sixteen hour fasting period. The authors insist on a better distribution of the food intake to prevent a concentration of food, especially that supper be as late as eight or eight-thirty p.m. No meals can be omitted and there should be no late sleeping on Sunday morning. If swimming, golf, or other exercise is indulged in, a sweet drink may be taken to prevent hypoglycemia.

Protamine zinc insulin is started in a single dose before breakfast. This dose is usually two-thirds the previous daily dose of regular insulin. This is slowly increased (about five units every three days) until the fasting morning urine is negative for sugar. Then if there is glycosuria after any meal, the rapidly absorbed fruits and fruit juices are eliminated from that meal. If this is not successful shift five to ten grams of carbohydrate to supper. Glycosuria is most common after breakfast therefore small breakfasts without fruits or fruit juices may be essential. Large breakfasts were necessary with the old insulin.

If hypoglycemic episodes occur persistently after any meal, the addition of a few grams of carbohydrate to that meal will usually relieve the difficulty. Similar diet shifts have in nearly all instances in the author's experience (140 patients) relieved postprandial glycosuria and nocturnal hypoglycemia without the supplementary use of regular insulin.

—D. C. W.

1. Advantages of Prozinsulin (Protamine Zinc Insulin) Therapy. Pollack, Herbert and Dolger, Henry. *Ann. Int. Med.* XI:XII, June, p. 2010, 1939.

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### OUR ADVERTISER

A request from an advertiser came to the office recently. "How many years has ..... advertised continuously in the *Journal of The Kansas Medical Society*?" We found that this company had used our pages continuously for many years, always carrying one page and often more each month. We also found that there are several advertisers now using space who had been with us since the present *Journal* was founded.

Advertising accepted for use in the Journal is subject to the approval of the Council of Pharmacy and Chemistry and the Editorial Board. The companies who are able to obtain approval are the ones who (1) have refused to manufacture poor products or make inaccurate claims, (2) who have spent vast amounts in research, constantly perfecting their products. For many years the American Medical Association has cooperated and assisted in all ways possible to obtain honesty in medical advertising. The Federal Trade Commission has exercised its jurisdiction over false and misleading advertising and is attempting to establish the facts as to whether the claims made by the manufacturer of a product are truthful or not truthful. Hearings for this purpose are to be conducted under the new Federal Pure Food and Drug Law and doctors will many times be the only ones qualified to give testimony as to whether a drug or a remedy lines up to the claims made for it. Thus the campaign goes on for truth in advertising for the benefit of the consumer, and thus are the elements of advertising acceptable in an ethical medical publication.

The September issue of the Journal carried more than twenty-three pages of advertising. More advertising than any issue this year other than the convention number. With the increase in advertising space in the Journal it is obvious the advertisers believe in and desire to further ethical advertising in ethical medical publications.

It has not been the policy of the Journal to use advertising by-lines such as; "Patronize your advertiser", "Say you saw it in the Journal", "Help make your Journal advertising pay", or "Please mention the Journal when writing advertisers". We have always felt that members understood the importance of those facts.

In part the Journal of The Kansas Medical Society is made possible because of advertising. We urge our readers to patronize our advertisers. This cooperation will please the advertiser and assists in furthering the companies who have tried the most to cooperate with the medical profession in producing good products with honest claims. Our advertisers are old friends remember their names when buying.

## MUSCLEING INTO MEDICINE

The following editorial published in the Leavenworth Times of May 4, is of interest to all physicians:

The eighteenth annual session of the Kansas Medical Society was held in Topeka this week. Thus we learn that the medical association goes back beyond statehood, and that the doctors of the past were as alert as those of the present to learn through discussion and exchange of opinions what more they could do for the people's health and physical wellbeing. The amazing changes in life since territorial days, and phenomenal development in curative medicine and surgery have kept pace with each other because doctors are men devoted to the service of the people, and untiringly interested in research in learning what is new and valuable in medical discovery for the protection of the public's health.

The "horse and buggy doctor" of the earlier days has given way to the modern doctor equipped with latest knowledge and a telephone, who can speed to his patient's side in his swift motor car over paved roads in less time than he even could have been notified of the need for his services in more primitive times. Specialists and hospitals are near at hand to give expert care to the suffering. But one thing has not changed. Today's doctors follow the same fine tradition of service to their patients as did their pioneer predecessors; and physicians must continue to be guided by that tradition, if the best interests of their patients and families are to be served.

The relation of a doctor to his patient is one of the closest of human relationships. There is an intimacy that grows up there with which nothing must interfere. Yet the government proposes to disturb this sacred relationship by the introduction of what is variously termed socialized medicine, government or state medicine; but all of which are only polite names for political medicine.

No worse thing than government intrusion into the field of medicine could happen for the public's welfare. It is unthinkable that the politician ever should sit, even figuratively, in the doctor's private office or the sick room, what though he be cloaked with the name of socialized medicine for relief from suffering. Concerning the proposal to regiment medicine, The Topeka State Journal says in part:

Government has muscled into many lines of ac-



tivity in recent years. Just now it is giving its attention to groups which so far have escaped it. One of those groups is medicine. As in the case of other groups already brought under varying degrees of Washington control, the government comes with appealing phrases and the offer of funds. But, when government buys favor through grants and gifts and concessions, it turns the reins over to politics.

The politician serves a useful purpose. It is through him that government is organized and kept in operation. Today we are putting the government, which means politician, in command of more and more activities. He is reaching out to take over control of medicine.

A picture of a doctor taking orders from the ward leader would be an exaggeration, but only such an exaggeration as the cartoonists use to tell the truth.

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## EYE, EAR, NOSE & THROAT

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### MYOPIA AS A CONTRIBUTING ETIOLOGICAL FACTOR IN PSYCHOSIS\*

Herschel S. Smith, M.D.

Osawatomie, Kansas

Organic eye disease is frequently found to be a contributing factor in the production of mental disease. Of the refractive errors, myopia leads to a fundamental personality pattern that at times may figure largely in the psychosis. The following case summary is one in which the patient presented a moderate amount of myopia and a personality change that is quite constant with the type of existence forced upon the patient by the visual limitations.

#### CASE REPORT

**History.** A white, married, female, aged 40, was admitted to the Osawatomie State Hospital because she thought herself to be the Supreme Power and had visions of converting the world; she was agitated, noisy, incoherent in speech, and had flight of ideas.

Pertinent facts in the history are that she attended high school but never finished; she had a retiring disposition, very quiet, was not inclined to be friend-

ly, disliked crowds, and did not enjoy social functions. She took no active interest in politics or lodge work. Theaters were rarely attended. She had no interest in sports or out-door life. Her time was largely spent in reading and doing fancy work. She was a lover of music but had no music ability herself. About two years ago she became extremely interested in religion.

**Examination.** General physical and neurological examination was negative. The eye examination showed the vision to be 15/200 for far and J<sub>1</sub> for near in both eyes. Retinoscopy showed a refractive error of 4.00 diopters of myopia in each eye. With a -4.00 lens the vision was corrected to 20/20 in each eye. She has never worn glasses.

**Treatment.** The patient was given metrazol shock therapy, following which there was marked improvement. The refractive error was corrected with the hope that a better social adjustment would be possible.

#### COMMENT

One cannot say that the refractive error caused the patient's psychosis, however, this physical handicap had a tendency to cause the patient to become interested in things that were easily attained, while omitting those activities which were made difficult because of faulty far vision. Her activities were therefore chiefly made up of those that she could feel, hear, and see at close range. Crowds were avoided, possibly, because of difficulty in distinguishing features. Friends thought her asocial because she failed to recognize them. Sports held no interest since fairly keen vision is a necessary requirement. The theater was boring because the projected characters were poorly defined.

Instead of living in an enclosure bounded by the short limits of her clear vision, the correction of this refractive error in childhood would have broken down this barrier and might have led to a more normal adjustment and personality pattern.

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## MEDICAL ECONOMICS

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### PUBLIC HEALTH ADVERTISING

Public health advertising by county medical societies is attracting considerable interest throughout the state. Several county medical societies are experimenting with advertising programs of this kind at the present time and several others are considering the institution of similar programs. The Saline County Medical Society was one of the pioneers in

\*From the department of Ophthalmology, Osawatomie State Hospital, Osawatomie, Kansas.

this activity, with a program prepared by Dr. E. G. Padfield, of Salina, which has been in operation for the past two years.

Dr. Padfield was asked to describe the Saline County program at a meeting of the Oklahoma State Press Association held in Oklahoma City last June. The paper which he presented contains an interesting description of the possibilities for effectively distributing public health information through the medium of paid columns in newspapers. Unfortunately space does not permit the complete paper to be presented in these columns. Several excerpts however, are as follows:

"Before going farther it would be well to speak of medical ethics in regard to publicity. All medical organizations from the county medical Societies to the American Medical Association are against advertising by the individual. This standard has the support of all doctors of medicine worthy of their profession. If individual advertising were permitted or condoned, the profession and the public would both suffer. However, in our desire to steer clear of the individual type of advertising, it seems to me the medical profession has lost sight of the fact that the public sometimes suffers from our silence."

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"I happen to be one of those who believe the public is not unintelligent. That when it is given the facts, it will have the good sense to act upon them. This is the basis of our publicity campaign. As you may have noticed we have tried in our campaign to talk in language which all would understand. Often it is not easy to write about medical subjects in a manner that is understandable, but this must be done if the layman is to get from these articles the knowledge which they contain. In addition to being understandable, the leads must catch and hold the attention. In this I believe we have been successful. We have used an insignia at the top of each article to attract attention and which we hope will, in time, come to be associated with health in the minds of the people. To give truthful and accurate information must be the basis of any copy which teaches the public about medical subjects. Great care has been taken to verify the statements you find in our copy. To have them otherwise would certainly bring injury rather than help."

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"In planning a public health campaign of this kind, one should think of the parties most con-

cerned. These being first the public, second the medical profession and third the newspaper. Each of these parties is interested in the outcome. The result to each will largely depend upon the type of publicity. The good which each receives depends and is in direct ratio to what is given. The better the publicity and the more information it has in readable form, the better for the people. If the people read the articles and believe the facts presented, they will react as we desire, pay attention to their problems of health, and seek qualified medical assistance. In turn when the profession sees that it is getting results from the newspapers it will not only be willing but anxious to go ahead with the publicity."

"The one factor which the profession must be made to realize is that years of silence must be overcome by truthful, carefully worded and readable ads. They must also be made to see that this campaign, in order to be successful must be continuous, not for weeks or months, but for years. Now for a word about the newspaper. You may not believe this but if you would give this space to the profession, I for one would not want it. Doctors, the same as others, appreciate most the thing for which they have to pay. Give it without charge and it loses its value. Maybe you do not agree but I feel that doctors as a group are fine men and intelligent. Yet when I think of how much they need the good will of the newspaper and how little they do to get this good-will, then and only then do I begin to have a doubt in regard to them. Please do not misunderstand me. I know your editorials cannot be bought. Human nature being as it is though, I also know that you would show your appreciation of medical advertising in every way you could."

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"As newspaper men, you know better than I what a great influence you have on the public mind, and for that matter influence extends even to the seats of the mighty. This being so, isn't it about time that we as a profession begin to see the light? In the most ethical manner possible we have an opportunity to give constant, truthful information of tremendous value to the public. The newspaper would increase its revenue thousands of dollars, the profession would profit financially but even more important both would have materially assisted public health."



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## TUBERCULOSIS CONTROL

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### NATION-WIDE TUBERCULOSIS PROGRAM\*

Frederick T. Lord, M.D.

The favorable trend in the tuberculosis death rate throughout the United States is, for the most part, to be ascribed on the one hand to improvement in economic status and better housing and dietary standards, and on the other to a diminishing amount of community infection in consequence of education, case-finding and hospitalization. As these factors are to a considerable extent within our control, there is a prospect of the practical elimination of the disease.

Tuberculosis death rates vary with political subdivisions. Of the states, Arizona leads the list with a rate of 275 per 100,000 while Wyoming has the lowest rate, eighteen; Kansas death rate for 1938 is twenty-four. Because the rate is high among Negroes, the problem of tuberculosis is especially serious in the South. A higher prevalence of tuberculosis among Spanish-speaking Americans helps to account for high rates in the Southwestern states. Resort states such as Arizona, New Mexico and Colorado are confronted with a difficult problem because of the migration of health seekers. Standards of living influence tuberculosis and financial resources vary widely among the states. The provision of beds for the tuberculosis varies from 2.75 beds for each annual death to 0.20. Nine states make no provision for sanatoria, though five of them subsidize local institutions.

Tuberculosis control in the United States falls short of an attainable goal. Probably further substantial progress will not be accomplished without the inauguration of a uniform and adequate program throughout the country as a whole. Leadership and financial assistance in the solution of the problem should come from the central government, leaving the actual operation of the project to states and localities.

#### NATIONAL HEALTH PROGRAM

A national health program was presented at the National Health Conference in Washington, July, 1938. The section on the control of tuberculosis recommended case-finding, especially by x-ray examination of contacts of known cases, isolation and

treatment of persons with active disease and periodic observation of those with latent or quiescent disease. A draft of a proposed bill to carry out these measures was presented by Homer Folks to the National Tuberculosis Association in February, 1939 and was approved in principle as a working basis for federal provision. The suggestion was that the Surgeon General of the United States Public Health Service be authorized to prescribe the rules and regulations necessary to carry out the plan and that a Division of Tuberculosis Control be established in the Service. The bill suggests for the year ending June 30, 1940, an appropriation of a sum not to exceed \$7,750,000; for the year ending June 30, 1941, of a sum not to exceed \$33,500,000, for the year ending June 30, 1942, of a sum not to exceed \$37,000,000; and for each year thereafter of such sum as may be deemed necessary to carry out the purpose of this act, provided that subsequent to the year 1945 the sum shall not exceed \$17,500,000.

#### ADDITIONAL BEDS NEEDED

In addition to the beds already available for tuberculosis, it is estimated (on the basis of two beds per annual death) that about 40,000 more are needed. The criticism that from twenty-five per cent to thirty-five per cent of hospital beds in the United States are unoccupied does not apply to tuberculosis sanatoria, for a census covering 92,339 beds for tuberculosis patients showed fourteen per cent vacancies, but a waiting list almost as great. The unequal distribution in patient load indicates regional variation in the pressure for beds. Assuming that the decline of tuberculosis will continue, sanatoria should be so constructed and located that they can be used later for general or other hospital purposes.

The extent of the case-finding problem in any community may be roughly estimated by multiplying the number of annual deaths from tuberculosis by the number of discoverable cases, using five cases per death as the number which can be discovered, and multiplying this result by the estimated number of exposed persons, or 2.4 per family.

Persons reported as dying of tuberculosis, patients in tuberculosis sanatoria and those with tuberculosis in the practice of physicians are among the groups to which recourse may be had in the case-finding program, and each case so located may serve as the starting point for the investigation of family contacts.

#### MASSACHUSETTS PLAN

The Department of Health of Massachusetts has recently promulgated rules and regulations which, in part, are as follows:

As soon as a diagnosis of tuberculosis has been

\*National and State Program for Tuberculosis Control, Frederick T. Lord, M.D., New England Journal of Medicine, Vol. 220, No. 25, June 22, 1939.

established, arrangements should be made for the examination, including an x-ray of the chest, of all members of the immediate family and of other persons with whom the patient has been in close contact. If the family cannot afford x-ray examination by a private physician, facilities are available through the various state, county and municipal sanatoria. Persons with suspicious findings and those who have had contact with a tuberculous patient should be kept under medical observation as long as advised by the physician.

Case-finding in school children has been in operation since 1924. The school program suffers from failure to secure parental consent for the investigation of more than fifty to sixty per cent of the children. The advantages of the finding of tuberculosis in school children are twofold—to the affected child and to the community. Yet these advantages are fully realized only when the investigation includes both children and family contacts. In general, little has thus far been done to round out this part of the program and to examine by x-ray the family contacts of the children with the childhood (hilus) as well as the adult type of tuberculosis.

The examination of a larger proportion of the family contacts of tuberculous patients in the practice of physicians may be promoted by local boards of health through a circular letter to physicians asking for a list of all tuberculous patients under their care during the year, whether or not previously reported, emphasizing the importance of sputum examination in suspicious cases, calling attention to the availability of the State Bacteriological Laboratory or other approved laboratories, noting the importance of the x-ray in the early diagnosis of the disease and listing the facilities in the state for the x-ray examination of patients and contacts unable to pay.

Group investigation in Massachusetts should be extended to include all teachers, medical students, hospital interns and nurses, college students, diabetic patients, and nursemaids and domestic help in homes where there are children.

#### **SUPERFICIAL CANCER—SKIN AND LIP**

(Continued from Page 423)

the point of his nose. This had been treated with paste previous to coming here.

On examination there was an ulcer a little over 1 cm. that had eaten down to the cartilage and perforated through the nasal cavity. It was treated with 25 mgs. of radium screened through 1 mm. of brass and .3 mm. monel metal for forty-eight hours the

first treatment. At six-weeks intervals he had two similar treatments for twenty-four hours. This destroyed the cancer, even though the cartilage was invaded. This healed, leaving a hole through the end of his nose.

Letter received from him this year stating that he is living and well.

Case IV—J. T. F.

Patient was first seen December 21, 1923, after he had had carbon dioxide snow and paste applied for cancer of the lower lip. When he first came his lower lip had been destroyed by a cancer and his chin was a fungating, sloughing mass. He had a palpable submental gland near the midline. The patient had a little wash basin with little wires covering the lip which he carried under his chin to catch the drip.

He entered the Sterling Hospital, and at that time I only had 45 mgs. of radium, and when it was idle I applied it to his lip in different places. An applicator containing 45 mgs. of radium filtered through 2 mm. of lead was placed over various parts of the lesion, 1.5 cm. distance, at intervals from December 21, 1923 to February 12, 1934. He was given a total of 15,205 mg. hours.

The lesion responded to the treatment and his chin cleared up, but his lip is missing. In his second picture, April 23, 1924, you will notice there is no lip there, but his gums are showing.

He was heard from this year and is living and well.

Case V—D. T.

Patient was first seen August, 1923. He had five applications of radium—45 mgs. filtered through 2 mm. lead and 1.5 cm. distance.

His cancer disappeared and left just a small dimple in his lip. This patient lived out his expectancy and died ten years later of cancer of the esophagus.

Case VI—James L.

Patient was first seen November 7, 1924, with a basal cell cancer on his upper lip about 2 cm. in diameter.

He had three applications of 45 mgs. of radium screened through 2 mm. lead, 1.5 cm. distance. On November 7, 1924, it was on for forty-seven hours; November 24 for twenty hours; March 7 for twenty-four hours.

Photograph taken March 4, 1925, shows lesion entirely disappeared.

On one point there is no longer debate: The need of medical and social supervision for arrested cases of tuberculosis over a prolonged period is clearly indicated. It is only insurance against failure regardless of whatever procedure is adopted in the individual case. National Tuberculosis Association Annual Report, 1938.



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## NEWS NOTES

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### OSTEOPATHS

The Wilson County Hospital filed a motion to quash on October 2nd in the case pending in the Kansas Supreme Court between that institution and osteopaths Milton V. Gafney and H. C. Wallace. The motion filed is as follows:

#### MOTION TO QUASH THE ALTERNATIVE WRIT OF MANDAMUS

Come now the defendants and each of them and move this court for an order to quash the alternative writ heretofor issued in this case upon the grounds and for the reasons that the petition for the writ wholly fails to state any cause of action in favor of the plaintiffs and against the defendants or any of them. In support hereof and in connection herewith the defendants more particularly point out the several specific grounds which disclose the petition wholly fails to state a cause of action:

#### I

The petition for the writ shows upon its face that the plaintiffs have not been, and are not now, denied permission to practice osteopathic therapy, osteopathic obstetrics, osteopathic manipulative surgery or other forms of osteopathy in The Wilson County Hospital.

The petition shows upon its face that the sole and only rights which the plaintiffs' claim have been denied to them are the right to practice drug therapy, and the right to perform surgical operations with the use of instruments, in The Wilson County Hospital to which rights the plaintiffs are not entitled as a matter of law.

That paragraph seven of the plaintiffs petition herein clearly discloses that each and every right claimed by the plaintiffs herein is based completely and solely upon the use of drug therapy and the use of operative surgery with instruments as distinguished from osteopathy.

1. "Plaintiffs have had . . . patients with ailments . . . which require entrance into the abdominal cavities with surgical instruments in order to effect a cure . . . but the defendants have denied the plaintiffs the right to enter such patients in the Wilson County Hospital.

2. ". . . it becomes necessary or advisable to perform minor surgical operations or give minor surgical attention . . . but the defendants have denied and are denying to these plaintiffs and their patients the use of surgical instruments in The Wilson County Hospital for such purposes.

3. "Plaintiffs have had, now have and will continue to have obstetric cases . . . but the defendants are denying to these plaintiffs the right to use . . . drugs of any character, and are denying to these plaintiffs the right to use surgical instruments of any character.

4. "But the defendants have denied and are denying these plaintiffs the right to use any of such agencies while treating patients in The Wilson County Hospital:" The "agencies" referred to are a classifications of drugs and medicines which comprise the entire field of drug therapy.

#### II

The petition for the writ contains no allegation that the defendants or any of them have made any discrimination between these individual plaintiffs and other healers of the same class, ie. osteopaths. That as a matter of law the governing board of county hospitals have the discretionary right and power to prohibit or restrict the practice of different classes of healers to the type of healing authorized by licenses. That such classifications are not an unreasonable or arbitrary discrimination as a matter of law and do not deny these plaintiffs due processes of law and do not deprive these plaintiffs of any property right.

#### III

The petition for the writ shows upon its face that the plaintiffs seek to maintain this action of mandamus to require the doing of an act and the exercise of a power that is discretionary and not ministerial. That the plaintiffs seek, by means of this action, to require this court to substitute its judgment for the judgment of an administrative body exercising administrative discretion.

#### IV

The petition for the writ shows upon its face that it purports to be a collateral attack upon the judgment and order made by this court in the case of State ex rel., vs. Gleason, No. 33570 but does not allege any facts that warrant the maintenance of a collateral attack upon such judgment and order.

#### V

The petition for a writ shows upon its face that the plaintiffs seek to require the defendants to do and permit the doing of unlawful acts, under the laws of the State of Kansas.

#### VI

The Petition for a writ shows upon its face that plaintiffs are without legal capacity to maintain an action in mandamus against these defendants.

W. H. EDMUNDSON,

Attorney for Defendants.

Both parties in the litigation have been asked to file briefs on the motion by October 21st, and the motion has been set for hearing during the early part of November.

Mr. S. S. Alexander, United States District Attorney, recently completed and filed his appeal brief in the case of Kansas State Osteopathic Association v. William H. Burke, Collector of Internal Revenue, which is now pending in the United States Circuit Court of Appeals. It is believed this case will be heard during the November term of that court.

Mr. E. H. Hatcher, attorney for the Kansas State Osteopathic Association, recently filed demurrers in all of the injunction cases presently pending against certain osteopaths. The demurrer challenges the right of the Kansas State Board of Medical Registration and Examination to maintain these actions in its own name. The position taken by the osteopaths in the demurrer is that the Board of Medical Registration and Examination must maintain actions of this kind thru the Attorney General or thru the various county attorneys. The board maintains that it is charged under the Medical Practice Act to enforce the legal practice of medicine and surgery in this state and that it is therefore its right and obligation to bring actions for that purpose. Mr. Hatcher will file briefs on this question before the District Courts where the cases are pending by October 20th and the board will file its briefs within twenty days thereafter. If the demurrers are upheld

in favor of the osteopaths the board will have the option of appealing or having county attorneys join in the cases. If the demurrers are overruled the cases will proceed to trial on their merits.

### MINUTES

The following is a reprint of the minutes of several Society committee meetings:

#### CONFERENCE OF COMMITTEE CHAIRMEN

The annual conference of Committee Chairmen was held in Topeka on Sunday, September 10, 1939. The following committee chairmen attended:

Dr. C. C. Nesselrode was present as President of the Society

Dr. F. L. Loveland, Topeka

Dr. Philip H. Morgan, Emporia

Dr. L. S. Nelson, Salina

Dr. H. E. Snyder, Winfield

Dr. J. H. O'Connell, Topeka

Dr. A. K. Owen, Topeka

Dr. A. R. Hatcher, Wellington

Dr. Ray A. West, Wichita

Dr. John M. Porter, Concordia

Dr. George E. Milbank, Wichita

Dr. Robert H. Moore, Lansing

Dr. C. Omer West, Kansas City

Dr. Fred J. McEwen, Wichita

Dr. Arthur D. Gray, Topeka

Dr. L. M. Tomlinson, Harveyville

Dr. A. W. Fegty, Wichita

Mr. J. F. Austin, was present as Executive Secretary of the Sedgwick County Medical Society

Mr. Clarence G. Munns, was present as Executive Secretary

Suggested programs for each committee were presented by Dr. Nesselrode. These were discussed and assigned to the various committees. The Committee on the Control of Cancer, the Committee on the Study of Heart Disease, and the Committee on Scientific Work presented reports on meetings they have held this year. Each committee was asked to handle all of the projects assigned to it, and any other activities in which it wishes to engage.

Adjournment followed.

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#### COMMITTEE ON SCIENTIFIC WORK

A meeting of the Committee on Scientific Work was held in Topeka on Sunday, September 10, 1939.

Members present were: Dr. John M. Porter, Chairman, Dr. St. Clair O'Donnell, Dr. R. M. Isenberger, Dr. A. R. Hatcher who substituted for Dr. Karl Voldeng, Dr. C. C. Nesselrode, Dr. F. L. Loveland, Dr. Philip W. Morgan, Dr. J. W. Kleinheksel, Dr. James S. Hibbard, Dr. F. P. Helm, Mr. J. F. Austin, Executive Secretary of the Sedgwick County Medical Society, and Clarence G. Munns, Executive Secretary, were also present.

Dr. Nesselrode discussed the importance to the Society of having a central committee to expand, further, and coordinate scientific endeavor and suggested that this committee accept that responsibility. Following a discussion of possibilities in this regard, the committee agreed to attempt to formulate an ex-

tensive plan for expansion and coordination of scientific work.

First item of discussion was the possibility of improving statistical and public health information for Kansas physicians. Dr. Helm stated the Kansas State Board of Health will be happy to assist in any way it can in this connection. A suggestion was approved that the Kansas State Board of Health be requested to add a third page to its present morbidity and mortality report wherein brief and pertinent information of current public health importance can be called to the attention of all physicians. Suggestion was also made that this plan not be routinely used, but instead only when urgent and necessary information can be provided. Likewise, that the information be presented in a form to attract and arrest immediate attention. Dr. Finney was asked to assist the Kansas State Board of Health in the preparation of plans for this purpose. Dr. Porter was asked to prepare a statement for publication in the Kansas State Board of Health news letter, stressing the importance of public health information and statistics. It was the belief of the committee that information of this kind would tend to provide much assistance and many advantages.

A further suggestion was approved that the Kansas State Board of Health be asked to forward bulletins to the Councilors, the officers of the county medical societies, and official representatives, or to all physicians in instances of actual or threatened epidemics and other emergency matters wherein there is need for the profession to plan and institute special organized programs. Likewise, that the Kansas State Board of Health be asked to forward periodic bulletins on leading causes of death, unfavorable increase in morbidity and mortality, the need for complete reporting, etc.

Dr. Kleinheksel and Dr. Hibbard, chairmen, respectively, of the Program Committee and the Scientific Exhibit Committee for the 1940 Annual Session, presented reports of the plans which have been made for that meeting. The committee approved all of the plans described and congratulated the Sedgwick County Medical Society for the excellent progress and preparation it has made in that regard. Dr. Kleinheksel stated his committee felt a larger number of Kansas members should be included on the program of Kansas annual sessions and suggested that the Committee on Scientific Work might be able to assist in the handling of this function for the 1940 meeting. The committee made the following offer in this connection to the Sedgwick County Medical Society:

1. That it would be willing to bulletinize the membership requesting the preparation of scientific papers with the thought in mind that some of the papers obtained thereby could be presented at the 1940 state meeting, and that some be presented at other meetings.

2. That the committee would be willing to suggest a list of Kansas speakers for the 1940 meeting.

3. That Sedgwick County Medical Society select a list of its own choosing.

It was the feeling of the committee that the first alternative presents many advantages, and in the event time does not permit this to be accomplished



during the present year that a method of this kind should be utilized in future years.

Dr. Hibbard stated his committee would appreciate assistance in obtaining a greater number of scientific exhibits from Kansas members. It was agreed that a bulletin on this subject should be forwarded to the county medical societies, and Dr. Hibbard was asked to prepare a scientific exhibit prospectus for inclusion in that bulletin.

The question of methods of approval for technical exhibits at annual sessions was tabled until a later meeting of the committee.

Discussion followed concerning the possibility of utilizing the Journal, bulletins, and other methods to acquaint members with new scientific discoveries, procedures, etc. It was felt that a service of this kind would be of value and Dr. Isenberger was asked to supervise this function.

It was decided that the committee should attempt to cooperate with the various Society committees, and the county medical societies in the coordination of a post graduate program, and that the committee should conduct a survey of the needs and desires of members for post graduate instruction. Dr. Porter was asked to investigate the possibilities of holding district meetings with speakers furnished on an interchange basis. As a result of the response to the plans of the Committee on the Study of Heart Disease, approval was given to the general plan of individually financed post graduate courses. The importance of pathology in all review and post graduate work was discussed and it was suggested this be emphasized to all committees planning graduate work.

The question of specialty and section organization was discussed, and it was the feeling of the committee that organizations of this kind should not be encouraged.

Equipment needs in the state, and the question of economic use of present equipment were tabled until a later meeting of the Committee.

Adjournment followed.

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#### CONSERVATION OF EYESIGHT

A meeting of the Committee on the Conservation of Eyesight was held in Lawrence on October 1, 1939.

Members of the committee present were as follows: Dr. Lyle S. Powell, Chairman; Dr. George Gsell; Dr. J. G. Janney; Dr. H. L. Kirkpatrick; and Dr. Clifford J. Mullen. Dr. John Billingsley and Mr. Leroy Hughbanks; were present as representatives of the Kansas State Board of Social Welfare. Clarence Munns was present as Executive Secretary.

Dr. Powell presented a report of the Conference of Committee Chairmen and of the suggested projects assigned to this committee at that conference.

Mr. Hughbanks presented a statement on behalf of the Division for the Blind of the Kansas State Board of Social Welfare showing the progress made to date on the restoration of eyesight program and the prevention of blindness program and including a recommendation that this committee prepare a suggested procedure for the handling of the medical functions of sight saving classes. Mr. Hughbanks also asked for suggestions as to ways and means in which the Division for the Blind can assist in improving these programs. The committee expressed its appreciation to Mr. Hughbanks for his statement and for the ex-

cellent cooperation which the Division for the Blind and the Kansas State Board of Social Welfare has provided.

Dr. Gsell reported concerning the studies of his sub-committee on sight saving classes. The committee adopted the following suggestions in that regard:

1. That it is its belief that admittance to sight saving classes should be based upon 20/70 visual acuity as recommended by the National Association for Prevention of Blindness or upon the recommendation and advice of an examining ophthalmologist.

2. That examinations of sight saving class applicants should be conducted by ophthalmologists on the Kansas State Board of Social Welfare's approved list.

3. That the fee for examination of Social Security Act or other indigent clients who are applicants to sight saving classes should be \$5.00.

4. That the examination to be given to sight saving class applicants should be the same as given to blind assistance clients and should include complete refraction unless such is contraindicated.

Upon a motion made by Dr. Mullen, seconded and carried, the committee recommended that the Division for the Blind of the Kansas State Board of Social Welfare publish a new bulletin describing the medical blind program and showing all additions which have been made to that program since the last bulletin if this kind was published.

Upon a motion made by Dr. Gsell, seconded and carried, the committee suggested that the Division for the Blind and Dr. Billingsley, State Ophthalmologist, in conjunction with Dr. Kirkpatrick study possibilities for simplifying the reports and forms presently used in connection with the medical blind program.

Upon a motion made by Dr. Gsell, seconded and carried, the committee agreed to offer its services as a medical advisory committee to the Division for the Blind of the Kansas State Board of Social Welfare believes it can be of assistance in that regard.

Decision was made that the following suggestions pertaining to the office of State Ophthalmologist should be forwarded for the consideration of the Kansas State Board of Social Welfare:

1. That the State Ophthalmologist should be a diplomate of the American Board of Ophthalmology.

2. That in order to permit as many physicians as possible to become interested in and acquainted with this work, it is suggested that the term of office of the State Ophthalmologist be affixed at eighteen months and that the appointments be made on a rotated basis in various parts of the state.

3. That it is the consensus of the committee that the State Ophthalmologist and his assistants should not accept blind assistance clients for examination or treatment providing it is possible to increase his salary to \$300.00 per month in order to compensate him for the loss of his own patients in that manner.

Dr. Gsell was asked to supervise all matters on behalf of the committee in regard to sight saving

classes and he was also asked to consult with Mr. Hughbanks for the preparation of plans in this regard.

Upon a motion made by Dr. Gsell, seconded and carried, it was agreed that the committee shall offer its services to the Kansas State Board of Regents for an inspection of the facilities at the Kansas State Blind School and the Kansas State Deaf School and for the preparation of recommendations on that subject. That if the Kansas State Board of Regents feels this suggestion would be helpful, Dr. Powell, Dr. Kirkpatrick and Dr. Billingsley shall serve as a sub-committee for that purpose.

Upon a motion made by Dr. Mullen, seconded and carried, it was agreed the committee shall recommend to the President that the State Ophthalmologist be made an ex-officio member of this committee.

The following actions were taken in regard to the presentation of post-graduate courses on eye, ear, nose and throat:

1. That the committee attempt to sponsor a short post-graduate course for eye, ear, nose and throat specialists on those subjects.

2. That Dr. Powell appoint a sub-committee for study and preparation of plans in that regard.

3. That Dr. Janney continue to study possibilities for presentation of a state-wide post-graduate course on eye, ear, nose and throat for all members.

Discussion followed concerning the provision of eye classes to indigent persons. Mr. Hughbanks was asked to obtain information concerning possibilities for coordinating present programs of this kind under the Kansas State Board of Social Welfare.

Dr. Powell was asked to confer with Mr. Hughbanks concerning the possibilities for publishing additional bulletins and pamphlets on the subjects of prevention of blindness and conservation of eyesight.

Dr. Powell was asked to investigate the possibilities for providing more efficient text books on public health in Kansas schools.

Dr. Powell was asked to continue as editor of the section on eye, ear, nose and throat in the Journal.

Adjournment followed.

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#### COMMITTEE ON AUXILIARY

A meeting of the Committee on Auxiliary was held on October 3, 1939, in Kansas City, Kansas.

Members present were Dr. C. Omar West, Kansas City, Chairman; Dr. F. B. Coffey, Hays; and Dr. L. B. Gloyne, Kansas City. Mrs. L. B. Spake was present as President of the Kansas Medical Auxiliary and Clarence G. Munns was present as Executive Secretary.

Decision was made that the committee should recommend to the Auxiliary that it devote its major efforts during the next year to the furtherance of lay education activities through the medium of women's clubs and women's organizations.

Decision was also made that Dr. West should prepare a recommended procedure in this regard for consideration by the Auxiliary; that if the Auxiliary desires to approve this project the committee will be happy to assist in the following ways:

1. To bulletinize the recommended procedure to the county medical societies with the request that they assist local auxiliaries and mem-

bers wives in all ways possible in this connection.

2. To request Dr. C. C. Nesselrode to issue a presidential bulletin on this subject.

3. To assist the county medical societies and the Auxiliary in obtaining movies, loan packets, and any other information desired.

4. To publish follow-up bulletins and to assist in all other ways possible.

Adjournment followed.

The meeting on the Committee on Control of Tuberculosis was held at the Norton Sanatorium on October 8. The minutes of this meeting will be published in the next issue of the Journal.

Meetings of the Stormont Medical Library Committee, the Committee on Medical Schools and the Committee on Medical Economics are to be held in the near future.

#### HOSPITAL MEETING

The Annual Meeting of the Kansas State Hospital Association will be held at the Jayhawk Hotel in Topeka on December 8-9. All members of The Kansas Medical Society are invited to attend.

#### INDIGENT CARE

Dr. F. L. Loveland, Chairman of the Committee on Medical Economics has been holding a series of conferences with representatives of the Kansas State Board of Social Welfare in the interest of determining possibilities for obtaining state financial participation in county medical society indigent care plans.

If arrangements of this kind are legal and practical the various counties will be extended an opportunity to obtain substantial financial aid from the state in the operation of indigent medical care plans which meet the requirements of the Kansas State Board of Social Welfare.

#### OKLAHOMA CITY CLINICAL SOCIETY

The Oklahoma Clinical Society has issued the following announcement about its Ninth Annual Fall Clinical Conference to be held October 30, 31 and November 1, 2, at the Biltmore Hotel in Oklahoma City. "This post-graduate medical assembly again offers the profession of the Southwest another series of intensive clinics and lectures covering the most important fields of medicine, surgery, and the specialties. The sixteen guest lecturers this year are among the recognized leaders in their respective fields and have chosen very practical subjects. In addition to the distinguished guests, the program includes seventy-two lecturers selected from local members of the Society, all of whom have teaching ability and practical experience in their particular subjects.

The officers and members of the Oklahoma City Clinical Society, being cognizant that the rapid development of new facts and theories in the field of medicine necessitates frequent post-graduate instruction for those who would progress, have arranged in this course a four-day period of very intensive instruction at a most nominal expenditure of time and money for those who attend. Those of us who have attended this conference in the past have been impressed with the precision in which the program is carried on, the diversity of it, the practical experience gained from the lecturers and our direct association with them,



and the whole-hearted hospitality accorded all visitors. We feel that the stimulation received from attending these meetings always tends to bring the profession into a closer understanding of its problems and into a closer fellowship as members of our great profession.

The announcement of the coming meeting will be found on page IV of this issue of the Journal, and we are sure you will be impressed with the prominence of the guest speakers and the program in general."

### NEW DIRECTOR

Mr. George T. Darby, city commissioner of Kansas City, recently announced the appointment of Dr. Ragnar T. Westman, of Minneapolis, Minnesota, as city health director of Kansas City, Kansas, to succeed Dr. William F. Lunsford, who died July 4, from injuries received in an automobile accident. Dr. Westman was born in Kramford, Sweden and came to the United States in 1912. He received his doctors degree from the University of Minnesota Medical School and his degree of doctor of public health from the Johns Hopkins School of Hygiene and Public Health.

Dr. Westman was formerly epidemiologist and director of communicable diseases of the public health department of the state of Minnesota. Eight applications were received for the position. Dr. Westman was selected by a committee of physicians in conjunction with Mr. Darby, and the city commission.

### KANSAS TUBERCULOSIS ASSOCIATION

The twenty-eighth annual meeting of the Kansas Tuberculosis and Health Association was held in Topeka, September 26-27. The program presented was as follows:

#### TUESDAY, September 26, 1939

12:30—Welcoming Luncheon.

- 1:00 P. M.—Presiding: Doctor C. E. Coburn, President Kansas Tuberculosis and Health Association.  
 Advances in Tuberculosis Control—  
 Dr. William A. Doppler, New York.  
 School Health Education—Dr. J. Ralph Wells, Head of Dept. of Biological Sciences, Teachers College, Pittsburg.  
 The Health Messenger Plan of Selling Christmas Seals—Miss Agnes Engstrand, County Superintendent of Schools, Manhattan.  
 Use of County School Health Fund—Mrs. Hada M. Nelson, Co. Supt. of Schools, Troy.  
 Correlating Health and Subjects Taught in Rural Schools—Howard O. Stone, Co. Supt. of Schools, Westmorland.  
 A Minimum of Three Seals per Capita for 1939—  
 C. H. Lerrigo, M. D., Topeka.  
 What Is Your Mailing List Worth?—Miss Luella Taylor, Vice-President Kansas Tuberculosis & Health Association, Topeka.
- 4:00 P. M.—Adjournment to Hillcrest Sanatorium.  
 Demonstration by Doctor Forrest Loveland and Dr. Omer Raines of reactions to Tuberculin Testing. Educational films will be shown.

#### WEDNESDAY, SEPTEMBER 27 MORNING

- 7:45—Christmas Seal Publicity Breakfast at Hotel Kansan.

- 9:00—Christmas Seal Symposium—Led by Mrs. Rene A. Massmann, Pittsburg.  
 Discussion by Chairmen Simmons and Eldridge.  
 Program of Work—Led by Mrs. F. W. Boyd, Phillipsburg.  
 Discussion by Chairmen McCormick, Sabin and Hofmann.  
 Importance of the Early Diagnosis Campaign in the Well-Balanced Health Education Program of a County Tuberculosis Association—  
 Dr. W. A. Doppler, New York.
- 11:30—Business Meeting, Kansas Tuberculosis and Health Association.  
 Presiding, Dr. C. E. Coburn, President, Kansas City.
- 12:15—LUNCHEON—Hotel Kansan.  
 Vocational Rehabilitation.  
 Paper by Miss Tracy Copp, U. S. Department of Education Washington, D. C.—Read by Mr. Lyle Armel.

### AFTERNOON

#### Joint Medical and General Session

- 1:30—Presiding: Doctor F. A. Trump, Vice-President Kansas Tuberculosis and Health Association.  
 Motion Picture: "Diagnostic Procedures".  
 Greetings: F. P. Helm, M. D., Secretary Kansas State Board of Health.  
 Can We Afford the Cost of Disease?—F. C. Beelman, M. D., Health Officer, Wichita.  
 X-Ray Findings in Negative and Positive Reactors—R. I. Canuteson, M. D., Director Student Health Service Kansas University.  
 Technique of Tuberculin Testing with Demonstration of Reactions and Administration—Clifton Hall, M.D., Director Division of Tuberculosis Control, State Board of Health.

### STATE OPHTHALMOLOGIST

Dr. Clifford J. Mullen of Kansas City recently resigned his position as State Ophthalmologist for the Division of the Blind of the Kansas State Board of Social Welfare. His resignation was effective as of September 1, 1939. Following Dr. Mullens resignation the Kansas State Board of Social Welfare announced that Dr. John Billingsley of Kansas City has been appointed to serve as Dr. Mullen's successor.

### BULLETIN

Dr. James S. Hibbard, Chairman of the Committee on Scientific Exhibits for the 1940 Session has requested that the following bulletin be called to the attention of the members of the Society.

TO: All Presidents and Secretaries—Official Representatives County Medical Societies and All Other Counties  
 Subject: Scientific Exhibits Committee of the Eighty-first Annual Meeting to be held at The Forum, Wichita Kansas, May 15-16, 1940.

The Scientific Exhibits Section is to be one of the outstanding features of the 1940 meeting of The Kansas Medical Society. It is the hope of the general chairman and the exhibits committee to not only show the excellent scientific work being done by the physicians of Kansas, but also to organize a section in which Kansas physicians may

demonstrate their abilities by displaying animated exhibits which should prove extremely valuable and practical to all practicing physicians of the state.

Animated exhibits will feature various phases of medical practice. In the booth on obstetrics, physicians will demonstrate forceps delivery, versions, etc. In the booth on heart disease, different heart lesions will be demonstrated. There will be demonstrations on the treatment of burns and numerous other conditions which will be announced later.

The stationary exhibits will hold their regular place in portraying scientific progress. Forty of these exhibits will be our goal and we are encouraging all physicians to go through their records and dig out the interesting cases, original treatments, and procedures and remarkable results and present them as a scientific exhibit. In this group of exhibits, prizes will be presented to the most meritorious exhibitions. Three judges will be chosen from the list of guest speakers and they shall be given ample time to review the exhibits.

The object of this bulletin is to give you a general outline of the work to be done. We are very anxious to contact the physicians interested in the demonstration as well as the stationary exhibits. We urge you to contact the committee if you have a particular preference to one or another demonstration, or if you have in mind a certain man whom you feel should be especially capable of presenting an exhibit.

### SPECIAL BULLETINS

At the suggestion of the Society Committee on Scientific Work, the Kansas State Board of Health plans to issue special bulletins to the Kansas medical profession whenever epidemics are threatened or whenever unusual problems on public health matters arise which require special organized effort on the part of the profession.

The following bulletin issued on September 25th was the first of this kind:

#### DIPHTHERIA CARRIERS

"On September 20, Graham county reported 20 diphtheria carriers, with four cases of the disease—all in colored persons. Examinations conducted recently by the Lyon county health department showed that, out of 100 persons examined in the Mexican colony of Emporia, 100 were diphtheria carriers.

In view of the fact that different localities of the state harbor a large number of diphtheria carriers, the Kansas Medical Society urges its members to encourage the immunization of all children who are not already protected against diphtheria."

The board will also forward from time to time special bulletins on other subjects such as unusual increases in morbidity and mortality, needed public health programs and suggestions as to ways and means in which morbidity and mortality can be reduced.

### POST GRADUATE COURSE

The Committee on Control of Heart Disease will sponsor a post graduate course on that subject in Emporia on October 16-20. The speaker for the course will be Dr. David Scherf formerly of the Wenckebach Clinic in Vienna, Austria, and now the Associate Professor of clinical medicine at the New York Medical College, in New York.

Dr. Scherf will present clinical and didactic lectures on the subject of heart disease during the mornings, afternoons and evenings of the five days of the course. Thirty-six members have registered for the course.

The Lyon County Medical Society will present a banquet for the members attending the course on October 19th.

### ADVISORY COMMITTEE

Governor Payne Ratner recently announced the following appointments to the Medical Advisory Committee of the Norton Sanatorium for Tuberculosis:

Henry Tihen, M.D., Wichita

N. E. Melencamp, M.D., Dodge City

Hugh Hope, M.D., Hunter

The present board consists of the above appointees and Dr. F. L. Loveland of Topeka, whose term does not expire until 1940 and Dr. F. P. Helm who serves ex-officio thru his position as secretary of the Kansas State Board of Health.

### PRESCRIPTIONS

The Kansas State Pharmaceutical Association published the following article in the September issue of its publication:

#### READ CAREFULLY, DRUGGISTS

At the request of Dr. J. F. Hassig, secretary of the Board of Medical Registration and Examination for the State of Kansas, Theo. F. Varner, legal counsel for this Board, handed down this opinion relative to the legality of licensed pharmacists filling prescriptions written by an osteopath. We are quoting Attorney Varner's opinion in full.

July 31, 1939.

Dr. J. F. Hassig, Secretary,  
Kansas State Medical Board,  
804 Huron Building,  
Kansas City, Kansas.

Dear Doctor Hassig:

Sometime ago you received an inquiry from Mrs. C. B. Miller, Executive Secretary of the Kansas Pharmaceutical Assn., relative to the powers and duties of licensed pharmacists in filling prescriptions written by an osteopath.

Under the laws of this state the right to sell drugs and fill prescriptions is a qualified right. Only those persons are privileged to sell drugs and fill prescriptions who have been licensed by the State of Kansas and who comply with regulations governing the sale of drugs.

A licensed pharmacist is privileged to sell medicine and drugs either commercially, that is direct to the purchaser, when all the provisions of the law relating to labelling etc. are strictly followed; or a licensed pharmacist may sell drugs "upon the prescriptions of licensed practitioners of medicine." (G. S. 65-1610). Under the laws of this state the only "licensed practitioners of medicine" are those persons licensed by the Board of Medical Registration and Examination. Any person holding such licenses may lawfully write a prescription which may be lawfully filled by a licensed pharmacist. No other licensed profession is privileged to fill a prescription nor is any licensed pharmacist



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**GYNECOLOGY**—Clinical and Diagnostic Courses starting every week. One Week Personal Course Vaginal Approach to Pelvic Surgery November 6th.

**OBSTETRICS**—Two Weeks Intensive Course October 23rd. Informal Course every week.

**FRACTURES AND TRAUMATIC SURGERY**—Informal Course every week.

**OTOLARYNGOLOGY**—Two Weeks Intensive Course starting April 8th, 1940. Informal Course every week.

**OPHTHALMOLOGY**—Two Weeks Intensive Course starting April 22nd, 1940. Informal Course every week.

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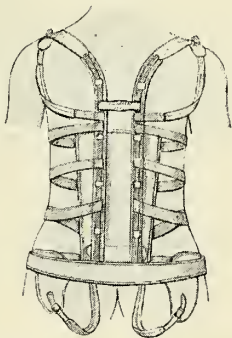
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privileged to fill a prescription written by anyone other than a licensed M.D.

There are several consequences which could follow the filling of a prescription written by someone other than a licensed M.D. A criminal action could be instituted by the County Attorney against the pharmacist for violating the provisions of the Pharmacy Act; or your Board, under the provisions of 65-1010, 1937 Supplement, could make the pharmacist a party to an injunction action against any individual who was unlawfully writing prescriptions in the practice of medicine and surgery.

A further consequence might be a civil liability on the pharmacist. It is a sound rule of law that an individual doing an unlawful act is presumed to be negligent. Should any damages occur from an unlawful prescribing of medicine it is my opinion that the pharmacist filling the prescription would be responsible for such damages as well as the unlicensed practitioner writing the prescription. On that point the several pharmacists in this state should consult their own attorney and rely upon the advice received from such consultation.

From the above it will be seen that your Board is concerned in this matter only so far as it may become necessary to make a pharmacist a party to an injunction against some individual unlawfully attempting to practice medicine. On this point I shall be pleased to advise you further when specific instances are brought to your attention.

With kindest personal regards, I am

Yours very truly,

THEO. F. VARNER, Attorney

Kansas State Board of Medical Registration  
and Examination.

## OBSTETRICS AND PEDIATRICS

Two post-graduate courses in obstetrics and pediatrics will be presented in the southcentral and the southeast portions of the state commencing October 23. The courses are furnished free of charge to Kansas physicians and are provided by the Children's Bureau and the Kansas State Board of Health in cooperation with the Maternal and Child Welfare Committee of the Society and the county medical societies of the places of the meetings.

The South Central Kansas Course will meet as follows:

Marion, October 23, 30-November 6, 13—Hotel Elgin.

Lyons, October 24, 31-November 7, 14—Chamber of Commerce.

Larned, October 25-November 1, 8, 15—Blue Goose Cafe.

Pratt, October 26-November 2, 9, 16—Municipal Building.

Kingman, October 27-November 3, 10, 17—Chamber of Commerce.

The speakers for this course will be: John H. Randall, M.D., and William F. Mengert, M.D., each an Associate Professor of Obstetrics and Gynecology, State University of Iowa, and Associate Obstetrician and Gynecologist of the University Hospitals, each serving two weeks. On pediatrics the speaker will be: Mandel L. Spivek, M.D., Assistant Attending Physician, Children's Memorial Hospital, Chicago, and Medical Director for the Illinois Children's Home and Aid Society.

The subjects will be:

Obstetrics—

First Week—Complication of the Urinary Tract in Pregnancy.

Complication of the Puerperium.

Second Week—Abortion. Its Cause and Treatment.

Hemorrhage in Late Pregnancy.

Third Week—Common Vaginal Infections and Syphilis.

Toxemias of Pregnancy.

Fourth Week—The Forceps Operation.

Complicated Labor.

Pediatrics—

First Week—Infant Feeding.

Second Week—Vomiting in Infancy.

Third Week—Diarrhea in Infancy.

Fourth Week—Pediatric Procedures.

The schedule of the Southeast Kansas course is as follows:

Eureka, October 23, 30-November 6, 13—Hotel Greenwood.

Winfield, October 24, 31—November 7, 14—Winfield Country Club.

Parsons, October 25-November 1, 8, 15—Christian Church.

Pittsburg, October 26-November 2, 9, 16—Stillwell Hotel.

Iola, October 27-November 3, 10, 17—Kelly Hotel.

The speakers for this course in obstetrics will be: M. Edward Davis, M.D., and William J. Dieckmann, M.D., each Associate Professors of Obstetrics and Gynecology in the University of Chicago; Attending Obstetricians and Gynecologists to the Chicago Lying-In Hospital; and Attending Gynecologists to the Albert Merritt Billings Hospital, each serving two weeks. On pediatrics the speaker will be J. D. Boyd, M.D., Associate Professor of Pediatrics, University of Iowa, Iowa City, Iowa.

Obstetrics—

First Week—The Prevention and Treatment of Post-partum Hemorrhage.

Diagnosis and Treatment of Bleeding of the Last Trimester of Pregnancy (Placenta Previa and Abruptio Placentae).

Second Week—Diagnosis and Treatment of Prolonged Labor (analgesia).

The Forceps Operation.

Third Week—Complications of Pregnancy Hyperemesis Gravidarum Pyelitis, Heart Disease, Anemia, Tuberculosis, Diabetis.

Fourth Week—Diagnosis and Treatment of Puerperal Infection.

Diagnosis and Treatment of Complicated Labor (Breech, Contracted Pelvis, Cesarean Section).

Pediatrics—

First Week—Antecedents of Disease in Childhood: Focal infection, exploitation, chronic fatigue, malnutrition; the nature of disease in childhood.

Clinical Aspects of Nutrition.

Second Week—Infant Feeding in Health and Disease: Breast vs. bottle feeding; construction of formulas; supplementary foods; dietary management of colic, vomiting, diarrhea, constipation, allergic disease, chronic intestinal indigestion.



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Third Week—Chronic Disease in Childhood: Rheumatic cycle; syphilis; diabetes mellitus; tuberculosis; importance of follow-up and aftercare.

Fourth Week—Physical examination of the infant or child; Distinctions from technic with adult; evaluation of growth and development; recognition of pre-disease states. Discussion of miscellaneous Pediatric conditions (round table discussions).

### BLIND PROGRAM

The following is a report of the Restoration of Eyesight Program and the Prevention of Blindness Program of the Kansas State Board of Social Welfare for the period ending August 1, 1939.

No. of eye examination reports.....	1996
No. of approved eligible for Aid to the Blind .....	1549
No. of applicants not eligible for Aid to the Blind .....	447

### RESTORATION OF EYESIGHT PROGRAM

Total number of cases declared eligible for treatment .....	602
No. of cases under treatment .....	103
No. of cases completed with treatment....	207
75 cases still eligible for Aid to the Blind.	
132 cases non-eligible for Aid to the Blind after treatment.	
No. of cases authorized treatment has been cancelled .....	16
Total cost of 14 cases completed since July 1, 1939 .....	\$1,113.41
Doctors fees .....	58.42%
Hospital fees .....	33.74%
Optical fees .....	3.68%
Drug fees .....	4.16%

### PREVENTION OF BLINDNESS PROGRAM

No. of cases eligible for treatment .....	97
Cases authorized for treatment .....	30
No. of cases authorized, now cancelled....	1
No. of cases completed with the authorized treatment .....	9
Total cost of completed cases (9) .....	\$ 767.75

### JOINT MEETING

The Kansas City Veterinary Society had a joint meeting with the Wyandotte County Medical Society, Tuesday, September 19. The subject discussed was the prevention and treatment of rabies, with talks by L. B. Gloyne, M.D., F. B. Croll, D.V.M., and discussion by H. R. Wahl, M.D., H. W. Kassel, M.D., and Deets Pickett, D.V.M.

### DEDICATION

The Kansas State Sanatorium for Tuberculosis presented a dedication program on August 3rd at Norton to commemorate the completion of the new \$425,400 Kenney Memorial Hospital addition.

The principal address was made by Governor Payne H. Ratner, who was introduced by Dr. C. F. Taylor, superintendent of the institution. The dedication program was as follows:

9:30-10:00 a.m.—Concert by N.C.H.S. band; James Kerr, director.

Presiding official, Dr. H. L. Snyder, Winfield, president of Sanatorium Advisory Commission, and a member of the Kansas State Board of Regents.

10:01 a.m.—Invocation by the Rev. C. E. Wilcox, Trinity Episcopal Church, Norton.

Address of Welcome—Dr. C. F. Taylor, superintendent, State Sanatorium.

Response—Warren Pauli, Sanatorium patient.

Response—Dr. W. C. Lathrop, Norton, member of the Kansas State Board of Health.

Response—E. A. Briles, Stafford, speaker Kansas House of Representatives.

11:00 a.m.—Dedicatory Address—Hon. Payne H. Ratner, Governor of Kansas.

Benediction—The Rev. W. F. Coy, Church of God, Norton.

The new addition was named for Dr. C. S. Kenney who was Superintendent of the Norton Sanatorium for many years. The main section of the hospital consists of five stories and each of the two wings has four stories. It is equipped with 253 beds which affords a total of 543 beds now in the institution.

Among the guests present at the dedication were Dr. J. A. Milligan of Garnett, who introduced the original state Sanatorium Bill in the State Legislature; Dr. Charles Huffman of Columbus, who sponsored the measure in the Senate; Dr. F. L. Loveland and Dr. F. P. Helm of Topeka; Dr. H. L. Chambers of Lawrence; and Dr. Sam Murdock of Sabetha, members of the Medical Advisory Committee of the Norton Sanatorium; Mr. Frank E. Milligan of Fort Scott and Mrs. Irene Meeker of Wichita, members of the State Board of Social Welfare.

### PURE FOOD AND DRUGS

The Society recently received the following communication from Dr. K. E. Miller, Senior Surgeon U. S. Public Health Service, Federal Trade Commission, Washington, D. C.:

"In a recent conference with Dr. Olin West, a problem of mutual interest to the medical profession and the Federal Government was discussed. It is at the suggestion of Dr. West that I am writing you this letter.

At great hazard not infrequently involving costly and harassing suits for libel the American Medical Association has for many years been conducting a valient fight against nostrums and quackery. Through these means an invaluable service has been rendered to the profession as a whole, and to every individual member. Various aspects of this service should be obvious to any physician. The Association, however, is without regulatory powers. Through the pages of the Journal and otherwise it can expose falsehood and advise against it, but it lacks the authority to specify and enforce the limits beyond which the advertiser of a product may not go in representing to the public the merits of a proprietary preparation.

Fortunately, however, there is an agency clothed with this authority and charged with this responsibility. This is the Federal Trade Commission which has jurisdiction over false and misleading advertising.





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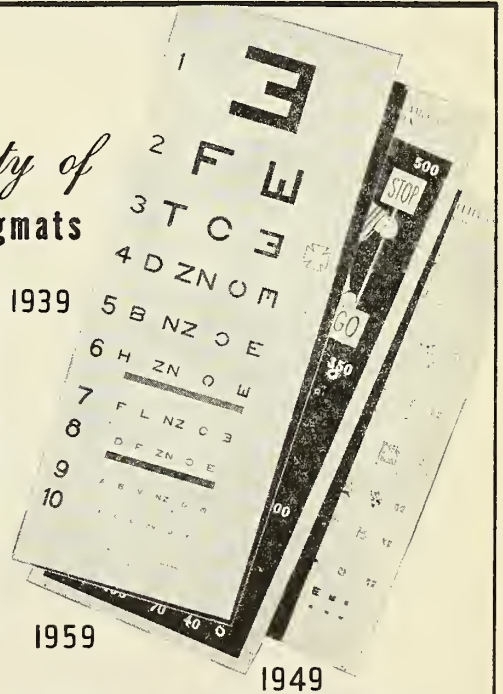
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In this capacity the Federal Trade Commission is the medium through which the ambitious of the medical profession with respect to false advertising can be realized. It is believed, therefore, that the successful accomplishment of this objective should be of vital interest to every member of organized medicine. It is, however, a problem which will require the unreserved support of medical organizations and their constituent membership. Whenever a case is contested it is necessary to introduce competent medical testimony in support of medical organizations and their constituency of the State Medical Association, know the proper men to whom to appeal within your State, for such assistance. Moreover, an appeal from you is much more direct and personal than such an appeal coming from me or from even the office of the American Medical Association in Chicago.

When hearings are necessary it is the policy of the Federal Trade Commission to schedule the hearing at or near the place where the headquarters of the respondent are located, so that little or no travel will be involved. I am in a position also to assure you that medical witnesses will be treated courteously and that every possible consideration will be given to the conservation of their valuable time, and to other items to suit their convenience. Though it is regretted that the Federal Trade Commission has not been provided with funds with which to pay expert witness fees, it is believed that this problem is of as much concern to the medical profession as it is to the Federal Government, and that physicians in performing this service are acting in the interest of themselves and the profession as a whole.

I will very much appreciate an expression from you as to whether or not you wish to cooperate with me in the manner indicated, if and when the demand for such assistance arises.

The Society has made reply that it will be happy to assist in any way it can.

## COUNTY SOCIETIES

The Cowley County Medical Society met at Arkansas City, September 28. The speakers were: Dr. J. S. Hibbard, of Wichita, who spoke on "Diagnosis and Treatment of Intestinal Obstructions", and Dr. V. L. Scott, of Wichita, who spoke on "Convulsions in Infancy and Childhood".

The Greenwood County Medical Society met, September 7, at Eureka. Dr. Norman Reider, of Topeka, spoke on "Psychiatry".

The Golden Belt Medical Society and the McPherson County Medical Society held a joint meeting at McPherson, October 12. The scientific program consisted of: Dr. Lester Lewis, of McPherson, whose subject was "Vitamine K in Relation to Biliary Tract Disease"; Dr. Murray C. Eddy, of Hays, who spoke on "Management of Gall Bladder and Biliary Tract Disease from the Standpoint of the Surgeon"; Dr. Cecil Snyder, of Winfield, who spoke on "Gastric Surgery"; and Dr. Francis A. Carmichael, Jr., of Kansas City, Missouri, who spoke on "Low Back Pain from the Standpoint of the Neuro-Surgeon". Dr. F. L. Loveland, of Topeka, was the dinner speaker.

The Jewell County Medical Society plans to sponsor an immunization program against diphtheria within the near future. The tests are to be given to Jewell county children

between the ages of six months and ten years, who's parents wish to take advantage of the service.

The Northwest Kansas Medical Society held a meeting at the Norton Sanatorium, October 3. Dr. D. V. Conwell, of Halstead, spoke on "Migraine." Dr. L. E. Peckenschneider, of Halstead, spoke on "The Treatment of Congestive Heart Failure." Dr. J. L. Jensen, of Colby, presented a paper on "Basal Metabolism." Following the meeting the members inspected the new Kinney Memorial Hospital.

The Pratt County Medical Society held a dinner meeting at Pratt, September 22nd. Dr. M. E. Brownell, of Wichita, was the guest speaker.

The Southeast Kansas Medical Society Extended invitations to its September 27th meeting at Parsons, to several hundred guests. Dr. C. C. Nesselrode, of Kansas City, was a speaker. His subject was "Some Aspects of Jaundice in the Adult". The other speaker was Dr. Hugh Dyer, of Kansas City, Missouri, who spoke on "Jaundice of the Newborn".

The Sedgwick County Medical Society held its first fall meeting, September 19, at Wichita. Dr. Harold F. O'Donnell, of Wichita, spoke on "Sulfapyridine in the Treatment of Gonorrhea", and Dr. Robert H. Maxwell, of Wichita, spoke on "A Ten-year Study of Caesarian Section in Sedgwick County". A meeting on October 3, had Dr. Paul F. Stookey, Kansas City, Missouri, as the speaker. His subject was "Staphylococcic Septicemia".

The Shawnee County Medical Society held a meeting on October 2. Dr. Paul C. Colonna, of Oklahoma City, Oklahoma, spoke on "Diagnosis and Treatment of Acute Hematogenous Osteomyelitis". Tribute was paid Dr. C. F. Menninger, of Topeka, by the members of the society, on his completion of fifty years of medical practice in Topeka.

The Washington County Medical Society held a meeting, September 12th, at Washington.

The Wilson County Medical Society held a dinner meeting, September 11th, in Fredonia. The wives of members were guests.

## MEMBERS

Dr. F. C. Beelman of Wichita presented a paper "The Community Program in the Control of Tuberculosis", before the Mississippi Valley Conference on Tuberculosis at their meeting in Omaha, September 20-22.

Dr. John S. Betz formerly of Wichita has moved to Kansas City.

Dr. C. V. Black of Pratt has been appointed county health officer to fill the unexpired term of Dr. C. E. Phillips who died September 11th.

Dr. W. A. Grosjean formerly of Colby has moved to Lawrence where he will take special work and teach in the department of anatomy.

Dr. D. D. Holaday formerly of Osage City is in Nashville, Tennessee, where he is taking a post graduate course in public health at the Vanderbilt University School of Medicine.

Dr. A. H. Marshall of Topeka was elected President of the staff of the Stormont Hospital, at its meeting Septem-



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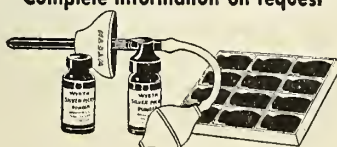
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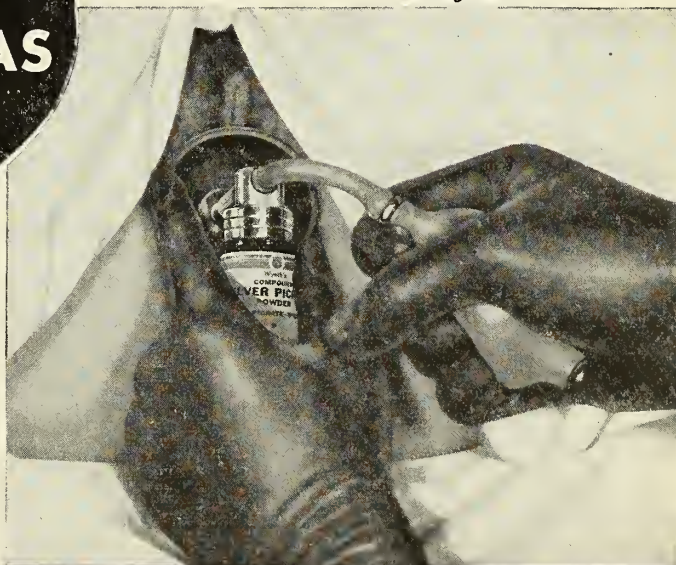
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ber 12. Dr. A. K. Owen was elected Vice-President and Dr. Wilson K. Hobart was re-elected Secretary.

Dr. Karl Menninger of Topeka was the guest speaker at a meeting of the Academy of Medicine, Cincinnati, Ohio, October 3. Dr. Menninger's subject was "The Death Instinct".

Dr. H. W. Palmer, of Wichita, is attending a six months course in aviation medicine, at Randolph Field, Texas.

Dr. M. E. Pusitz, of Topeka, is the author of an article entitled "The Treatment of Cerebral Palsies" which appeared in the September and October issues of the Physiotherapy Review.

Dr. Earl Mills, of Wichita, attended a symposium for consideration of blood and blood forming organs which was held at the University of Wisconsin, Madison, Wisconsin, August 4-6.

Dr. R. D. Russell of Dodge City, has been appointed chief surgeon at the soldier home at Fort Dodge.

Dr. V. L. Scott and Dr. C. H. Warfield of Wichita addressed the Alfalfa County Medical Society of Cherokee, Oklahoma, at their meeting September 26. Dr. Scott's subject was "Convulsions in Infancy and Childhood", and Dr. Warfield spoke on "X-Ray in the Diagnosis of Chest Lesions."

The American Bronchoscopic Association recently announced that Dr. E. M. Seydell of Wichita was elected a member of the council.

Dr. J. V. VanCleve of Wichita was the winner of the President's Trophy as the best golfer in the thirteenth annual Fall Golf and Shooting Tournament at Wichita.

## DEATH NOTICES

Dr. Percival W. Darrah, of Leavenworth, sixty-eight years of age, died August 26, of cardio renal vascular disease at the Cushing Memorial Hospital, Leavenworth. Dr. Darrah was born at Salina, Kansas, in 1871, and was graduated from the University of Pennsylvania School of Medicine, Philadelphia, where he was for several years a member on the teaching staff. He came to Leavenworth in 1903. He was a member of the Leavenworth County Medical Society.

Dr. Albert Earl Reed, fifty-eight years of age, died August 30, of coronary occlusion, at his home in Larned. Dr. Reed was born in Larned, July 20, 1881. He attended the University of Kansas School of Medicine and the Rush Medical School of Chicago, graduating from the later in 1905. He was a member of the Pawnee County Medical Society.

Dr. Charles E. Phillips, of Pratt, sixty-two years of age died September 11, of a heart attack, in Dodge City. Dr. Phillips was born at Edina, Missouri, in 1877. He was graduated from the Kansas College of Medicine, Topeka in 1905. In 1924 he studied surgery in Vienna, Austria. He was county and city health officer at the time of his death, and a member of the Pratt County Medical Society.

## ANNOUNCEMENTS

Medical service for the Civilian Conservation Corps has, in the past, been furnished by the medical section of the Officers' Reserve Corps with the exception of a few doctors who were employed on a contract basis. A recent decision of the Director of the CCC and the War Department permits the employment of doctors who are not Medical Reserve officers in this service.

Doctors needed for this service may now be employed under the rating of civilian employees or on a contract basis, the initial pay being \$2600 per annum. No quarters for families are provided, and the doctor will be required to pay for his food at camps. Temporary quarters for the doctor will be provided at the camps for a nominal fee. Doctors selected for this service will be required to pay their own travel expenses to the nearest district headquarters, where they will be put on temporary duty for instructional purposes before being sent to camps. Travel expenses incurred in the transfer of doctors from the district headquarters to camps or in the transfer from one camp to another will be paid by the Government. If the services rendered are satisfactory, the employment is more or less permanent.

The principal duties at camps consist of the medical care of the enrollees and the practice of preventive medicine. To be eligible for this service, the doctor must be legally qualified to practice medicine and physically able to perform the duties involved.

All doctors interested in this type of service are requested to submit their applications to the office of the Surgeon, Headquarters Seventh Corps Area, Federal Building, Omaha, Nebraska, giving date when available and preference of assignment in the following states: Minnesota, North Dakota, South Dakota, Iowa, Nebraska, Missouri, Kansas, and Arkansas.

It is requested that young doctors not now listed in the American Medical Association Directory be informed of this service.

The written examination for the American Board of Obstetrics and Gynecology and review of case histories (Part I) for Group B candidates will be held in the various cities of the United States and Canada on Saturday, January 6, 1940, at 2:00 p.m. Formal notice of the place of examination will be sent each candidate several weeks in advance of the examination date. No candidate will be admitted to examination whose examination fee has not been paid at the Secretary's Office. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held in June 1940.

Candidates for reexamination in Part I (written paper and submission of case histories) must request such reexamination by writing the Secretary's Office not later than November 15, 1939. Candidates who are required to take reexaminations must do so before the expiration of three years from the date of their original examination.

The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting in Atlantic City, N. J., on June 8, 9, 10, and 11, 1940, immediately prior to the annual meeting of the American Medical Association in New York City.

Application for admission to Group A, Part II examinations must be on file in the Secretary's Office not later than March 15, 1940.

After January 1, 1942, there will be only one classifica-





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tion of candidates, and all will be required to take the Part I and Part II examinations.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

The Omaha Mid-West Clinical Society announces the Seventh Annual Assembly to be held October 23-27 in Omaha, Nebraska. Speakers on the program are as follows:

Pediatrics; Dr. C. Anderson Aldrich, Winnetka, Illinois; Surgery; Dr. W. Wayne Babcock, Philadelphia, Pennsylvania; Medicine; Dr. Clifford J. Barborka, Chicago, Illinois; Eye, Ear, Nose and Throat; Dr. Frank E. Burch, St. Paul, Minnesota; Surgery; Dr. Elliott C. Cutler, Boston, Massachusetts; Medicine; Dr. William R. Houston, Austin, Texas; Neurology; Dr. Louis J. Karnosh, Cleveland, Ohio; Medicine; Dr. Samuel A. Levine, Boston, Massachusetts; Genito-Urinary; Dr. Clarence R. O'Crowley, Newark, New Jersey; Gynecology and Obstetrics; Dr. G. D. Royston, St. Louis, Missouri; Basic Sciences; Dr. Walter Schiller, Chicago, Illinois; Orthopedic Surgery; Dr. James S. Speed, Memphis, Tennessee.

SYMPOSIUM ON PRE- AND POST-OPERATIVE TREATMENT: Dr. Charles A. Elliott, Chicago, Illinois; Dr. William L. Estes, Jr., Bethlehem, Pennsylvania; Dr. John S. Lundy, Rochester, Minnesota; Dr. Walter G. Maddock, Ann Arbor, Michigan; Dr. John R. Paine, Minneapolis, Minnesota.

## NEW BOOKS RECEIVED

BAPTISM OF THE INFANT AND THE FETUS—An Outline For the Use of Doctors and Nurses, Fourth Edition—By the Rev. J. R. Bowen, Chaplain, St. Joseph Mercy Hospital, Dubuque, Iowa, Technical Advisor to Iowa State Planning Board and Member of the Iowa Public Health Committee. Published by the M. J. Knippel Company, Dubuque, Iowa, price 25 cents.

OPERATIVE ORTHOPEDICS—By Willis C. Campbell, M.D., Memphis, Tennessee. Published by The C. V. Mosby Company, St. Louis, Missouri, 1939. Containing 845 illustrations, four color plates, and 1154 pages. Chapter headings are titled: The Physiology and Pathology of Bones; Joints and Related Structures; Apparatus; Surgical Technique; Acute Infectious Arthritis or Pyogenic Infections of Joints; Low-Grade Affections of Joints; Arthrodesis or Fusion; Ankylosis and Deformity; Arthroplasty; Traumatic Lesions of Joints; Dislocations; Fractures; Malunited Fractures; Delayed Union and Nonunion of Fractures; Acute and Low-Grade Affections of Bones; Tumors of Bones, Joints, and Soft Tissues; Affections of Muscles, Tendons, and Tendon Sheaths; Affections of the Skin, Fasciae, Bursa, and Vascular and Lymphatic Systems; Affections of the Nervous System; Static or Postural Affections; Congenital Anomalies.

CLINICAL GASTROENTEROLOGY — By Horace Wendell Soper, M.D., F.A.C.P., St. Louis, Missouri. Published by the C. V. Mosby Company, St. Louis, 1939. Including sections on: Diagnostic Methods; The Oral Cavity; The Esophagus; The Stomach-Dyspepsia; Atony of the Stomach; Milk; Gastritis; Peptic Ulcer; Gastric Tumors; The Small Intestine; The Colon and Constipation;

Megacolon, Diverticulosis of the Colon; Polyposis of the Colon; Catarrhal Colitis-Colon Spasm; Ulcerative Colitis; Amebic Dysentery; Bacillary Dysentery and Colon Bacillus Infection; Intestinal Protozoa; The Nematode Parasites; Diarrhea; The Enema; Indicanuria; Intestinal Obstruction; Visceral Syphilis; Proctosigmoidoscopy; Proctitis and Proctitis Ani; Diathermy of the Rectum and Pelvic Colon; Liver and Gall Bladder; Pancreas; Sprue and Pellagra; Obesity; Allergy; Therapeutic Notes.

DO YOU WANT TO BECOME A DOCTOR?—By Morris Fishbein, M.D., Editor, Journal of the American Medical Association. Published by Frederick A. Stokes Company, New York, price \$1.50 per copy. Chapter contents are as follows: Medical Education Today; Preparation for Medical School; Choice of Medical School; Cost of Medical Education; The Internship; State Licensing Examination; The Specialist; On Beginning Practice; The Accessory Profession; The Future of Medical Practice; and The Contribution of Medicine to Public Welfare.

THE INFANT AND CHILD IN HEALTH AND DISEASE, With Special Reference to Nursing Care—By John Zahorsky, A.B., M.D., F.A.C.P., Professor of Pediatrics and Director of the Department of Pediatrics, St. Louis University School of Medicine, and Pediatrician-in-Chief to the St. Mary's Group of Hospitals; Fellow of the American Academy of Pediatrics, St. Louis, Missouri; and Elizabeth Noyes, R.N., Supervisor and Instructor of Pediatrics, Children's Hospital, San Francisco, California. Second Edition, published by the C. V. Mosby Company, St. Louis, Missouri, 1939. Containing 496 pages, 140 illustrations, seven color plates, and divided into three parts as follows: The Normal Infant and Child; The Diseases of Infants and Children; Procedures.

## BOOK REVIEW

THE PRIESTS OF LUCINA by Palmer Findley is a historical account of obstetrics, starting from its early origin. Dr. Findley has reconstructed the story of obstetrics, in the scholarly manner of the obstetric educator, to include much important medical history. The lives of practically all the key individuals of each period have been sketched and their contributions outlined in sufficient detail to form a logical, smooth sequence up to the modern times of Whitridge Williams.

The last hundred of its 421 pages has been quite properly devoted to the consideration of special subjects such as anatomy, forceps, the midwife, puerperal fever, and cesarean operation. This forms an excellent section to summarize and solidify these special aspects of the subject.

The bibliography is extensive and carefully organized in such manner that it should be most convenient for those interested in further study of any particular phase of the problem.

This book makes a definite appeal because of its concise, accurate treatment of the subject. With its style of organization and presentation it gives all the needed information without the irritating redundancy peculiar to historical works. The general medical reader should find it entertaining and illuminating even as the specialist should find it an invaluable compilation of fundamental material. The publisher of the book is Little, Brown and Company; its price, five dollars.

R. A. Schwegler, M.D.,  
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## AUXILIARY

### PRESIDENT'S MESSAGE

We, in this great state of Kansas, because of our geographical location, are surrounded by a certain sense of security from the horrible roar of guns in other lands, yet there is much in our particular field to give us cause to fear insecurity. This year shall we not make an earnest effort to prepare ourselves to be intelligently informed about the things that concern us in the field of medicine. There are many ways in which we can be silent partners, yet do much. I would like to recommend that each one read faithfully the page on medical economics in the A.M.A. Journal and your state Journal. Then as you proceed in your various clubs and social activities, casually let fall this information as the opportunity arises. In such procedure the lay people will become informed of what is going on and we will be helping from the side lines.

Our National Chairman has sent us some instructions to follow which will be given you in more detailed form, but I would like to quote one portion at this time. "Some propaganda for socialized medicine, presented to the lay press, in magazines and books, over the radio and from the public platform, seeks to undermine the confidence of the public in the willingness and in the ability of organized medicine to recognize and to provide for the health needs of low income groups in the nation. It is our business to present the attitude of the American Medical Association on these issues."

Let's not forget our Hygeia Campaign beginning October 1. Our goal should be to have more people reading our magazine.

Make a Radio Log of the Health Programs and inform your lay groups of the dates, hours and stations. In short let's each individual be a committee of one to disseminate intelligent information.

Mrs. La Verne B. Spake

Sedgwick County Auxiliary has inaugurated an interesting innovation in committee procedure this year. It is the Rotating Chairmanship Plan, and is devised to promote greater efficiency with a larger number of workers and with less burden carried by a few. It is applied to the Social and Program Committee.

Mrs. L. E. Knapp, Press-Publicity Chairman discusses the plan as follows: "The General Chairman has made a general outline for the year and assigned a different member to work out all of the details for each meeting. Whenever a committee in needed it is organized for a particular day and purpose. This is using sixteen chairmen in place of two, and provides many more members on small committees. Women are very willing to give plenty of time to planning when they know that one effort is all that is asked. In a large organization there is need for plans which require working together, which this plan makes more feasible. The plan sounds fine to us. We will report its results later.

Each month the General Chairman will attend the board meeting to maintain unity and bring as her guest the Acting Chairman for that month. This avoids too large a board membership, yet introduces many members to active par-

ticipation in general plans. The board will be divided into committees of four and each group will serve one luncheon for the board. The luncheon plan worked almost perfectly last year with almost perfect attendance.

Mrs. Knapp's letter was accompanied by many clippings indicative of Sedgwick County Auxiliary's membership interest in civic and social life of Wichita.

The Central Kansas Auxiliary met at Hays with Mrs. William Brewer as hostess September 7. Committee reports were given and Chairmanships announced. The Treasurer's report showed a favorable balance with a paid up membership of twenty-five. Mrs. Coffey told of her trip to the National Auxiliary Meeting in St. Louis.

The members joined the Central Kansas Medical Society members at dinner in the Lamar hotel.

The Cloud County Auxiliary met at dinner at the Burge's restaurant, Concordia, September 19. After the dinner a lively discussion of the year's plans was held. Particular stress was placed on the necessity of placing Hygeia as numerous as possible. Mrs. Kosar, State Chairman, reported that she had already circularized all county presidents and Hygeia chairmen and was eager to establish a Kansas record in number of subscriptions. The State Press-Publicity Chairman was a guest at this meeting and found an exceptionally alert, efficient organization of sincerely interested ladies.

Mrs. W. G. Emery, Chairman  
Press-Publicity.

Reveal Child's Adoption Early: Adopted children should be informed of their adoption as early as they are able to understand it. The Journal of the American Medical Association advises.

"The common technic used," The Journal says, "is to tell them that whereas most of their friends had to be accepted, their foster parents picked them out and chose them from a group of children and liked them best. That usually pleases the child and helps break the ice."

Glasses Cause No Lasting Eye Injury: Glasses can cause no permanent injuries to the eyes, Conrad Berens, M.D., New York, declares in the August issue of Hygeia, The Health Magazine.

Some persons who have become accustomed to better vision through wearing glasses forget how poorly they once saw and believe the glasses are responsible for the defects which still remain, he points out.

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# The Journal Of THE KANSAS MEDICAL SOCIETY

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## SERUM TREATMENT OF PNEUMONIA\*

by Claude D. Head, Jr., M. D.\*\*

Washington, D. C.

Serum treatment of lobar pneumonia began with the use of immune rabbit serum by the Klemperers in Germany in 1881. It is beyond the scope of this agent and all the early workers who have contributed so much to its development, but a few of the earlier reports may be mentioned. Washburn<sup>1</sup> recognized the advantage of early treatment when he said . . . "it is important to commence treatment as early in the disease as possible." Fanoni<sup>2</sup> states that patients were treated with serum as early as 1894 and 1895, and in a later article<sup>3</sup> advises that the serum be given subcutaneously twice in doses of 10 cc. He was enthusiastic in his praise of the serum. Lambert<sup>4</sup>, however, mentions both dog and rabbit serum, and states that results obtained did not justify continuation of this agent. Anders<sup>5</sup> likewise found the serum ineffective. The explanation of these inconsistent results did not become apparent until 1909, when Neufeld and Handel recognized that there were different strains of pneumococci<sup>6</sup>, and suggested a division of the organisms into fixed and distinct types. They showed that immune serum produced by injection of these organisms into susceptible animals was highly specific in its action, affording protection only against infection with the types of organism producing the immunity. On the basis of these results they first produced type specific antipneumococcus serum. This they used with good results in the treatment of patients suffering from pneumonia due to a specific type of pneumococcus. In 1912 at the Hospital of the Rockefeller Institute for Medical Research, New York City, Doctor Rufus Cole and his coworkers extended the practical application of Neufeld and Handel's discoveries. Horse serums for type I, type II and type III pneumococci were prepared and used in the treatment of cases of pneumonia due to these specific organisms. The type I

serum gave excellent results and its use has been continued. Results with type II serum were inconsistent, and after an extensive trial it was abandoned. The type III serum proved to be of so little value that its administration was soon discontinued. These early efforts with specific serum marked the beginning of work which was to prove that pneumonia need not always be a self-limited disease, but that in many cases it can be aborted and can be cut short with the proper use of type specific antipneumococcus serum.<sup>8</sup>

For many years little progress was made in the development of serum treatment for pneumonia. Then in 1924 Felton demonstrated that the part of the serum associated with the antibody could be separated from the therapeutically inert portion.<sup>9</sup> This discovery is now universally accepted as an important factor in the development and wider application of serum therapy. In 1928 the late Georgia Cooper began the monumental work which led to the production of therapeutic serums for all of the types formerly designated as group IV. By 1932 she had isolated and classified twenty-nine distinct types of pneumococci from this heterogeneous group.<sup>10</sup> Since that time serum prepared according to Felton's method has proved effective in lowering the mortality and in reducing the complications of some of these so-called "higher types".

With improvements in the methods of manufacture, the utility of type II serum was again studied. The results obtained to date have not been nearly as satisfactory as with type I serum, and it has been given in fewer cases. However, experience has proved that the case fatality of type II pneumonia can be reduced somewhat. Effective type III horse serum has not yet been produced. Recently, type III rabbit serum has appeared commercially, and workers have reported good results with its use. At present, type III serum must be considered still in the experimental stage. It is not too much to hope that as additional advances are made, the time may soon come when all serums will be equally valuable.

If pneumonia is to be treated with specific serum, a knowledge of the bacteriology of the disease is essential. It has been estimated that eighty per cent of the cases in adults and about fifty per cent of the cases

\*Presented at the 80th Annual Session of the Kansas Medical Society, Topeka, May 2, 1939.

\*\*Passed Assistant Surgeon, United States Public Health Service, Washington, D. C.

in children are due to the pneumococcus.<sup>11</sup> In the remainder the staphylococcus, streptococcus hemolyticus, hemophilus influenzae, or Freidlander's bacillus are usually the inciting agents.<sup>12</sup> The pneumococcus is a gram positive encapsulated diplococcus. Its capsule is composed of a complex carbohydrate or polysaccharide, chemically different for each type. Specificity and virulence are dependent upon the presence of this material.<sup>13</sup>

The use of antipneumococcus serum depends upon the determination of the specific type of invading organism. The present rapid method of typing is based on the observation of Neufeld in 1902 that when pneumococci are brought in contact with specific immune serum there is a marked swelling of the capsules. He attempted to apply this method to the rapid diagnosis of the types, but concluded that it would be impractical in less experienced hands because of certain difficulties which he encountered. Therefore, he abandoned the procedure.<sup>14</sup> The stimulus given to serum therapy by Cole and his coworkers led to the development of macroscopic and microscopic agglutination tests, precipitation tests, and cultural methods for determining the specific type of invading organism. These procedures, while accurate, were time-consuming, frequently requiring many hours or even days, and consequently delaying specific therapy by just this length of time. In 1931 Armstrong<sup>15</sup> announced a method which would reduce this time to four hours. He emulsified sputum from the pneumonia patient with an equal amount of broth, and injected 0.5 cc. of the emulsion into the peritoneum of a white mouse. Four hours later the peritoneal exudate, obtained by tapping with a fine needle or Pasteur pipette, was mixed with diagnostic serum and examined under the oil immersion lens. The pneumococci were observed for capsule swelling. In 1932 Armstrong<sup>16</sup> and Logan and Smeall<sup>17</sup> simultaneously reported an even more rapid method of typing. They mixed the sputum directly with diagnostic serum and examined it for the characteristic reaction. In 1933 Goodner<sup>18</sup> introduced this procedure to the medical profession in this country. It has proved to be simple, as accurate as more time-consuming methods, and rapid. The test can frequently be completed in less than one hour. For the rapid type diagnosis, this "Neufeld test" has replaced all other procedures. It is generally used at the present time for pneumococcus typing, although mouse inoculation is sometimes employed as a check in research studies.

For infants and young children who swallow their sputum, and for dehydrated, debilitated or comatose adults who cannot produce any, specimens may be

obtained by a deep pharyngeal or laryngeal swabbing.<sup>11</sup> The consequent coughing of the patient will frequently cause enough material to adhere to the swab, so that typing may be done directly. It is more often necessary, however, to place the swab in 1 or 2 cc. of nutrient broth, incubate it for two or three hours, and inject 0.5 cc. of broth into the peritoneum of a white mouse. At the end of four hours, the peritoneal exudate can be used for typing. This procedure causes a delay of several hours, but is necessary where sputum is not obtainable.

Blood cultures are also used for making a bacteriological diagnosis. It occasionally happens that the blood culture is the only means of obtaining any type diagnosis when the sputum or laryngeal culture is negative, or a true diagnosis when the sputum has revealed two or more types. The organism which has invaded the blood stream is the real offender, and is the one which requires vigorous attack.

As a last resort, where sputum, laryngeal culture, and blood culture are all negative, diagnosis may be obtained by lung puncture or suction. A needle is inserted between the ribs into the consolidated area of the lung and quickly withdrawn. The lung puncture material remaining in the needle is examined directly or incubated for a few hours, injected into a white mouse, and then typed according to the procedure mentioned above. Bullowa has shown that the lung puncture does not increase the incidence of empyema. However, it is true that deaths have been reported as a result of lung puncture, as have also the so-called pleural shock and air embolism. These accidents occur very rarely, but make the procedure one which should be done only as a last resort and only by a physician skilled in the technic.

To repeat for emphasis; typing may be done from 1) sputum, 2) laryngeal culture, 3) blood culture and 4) lung puncture. It is possible to arrive at a bacteriological diagnosis by one or more of these methods in almost all cases of pneumonia, both broncho and lobar. No patient with pneumonia should be permitted to go without a bacteriological diagnosis.

Knowledge of the presence and of the identity of the pneumococcus in the patient's blood stream is of vital importance not only in diagnosis, but in prognosis and in the determination of serum dosage as well. For all of these, blood cultures are of inestimable value to the physician. The generally accepted case fatality rate of pneumonias is around twenty-five percent. Bacteremic pneumonias, however, present a very different picture with a mortality which frequently reaches seventy percent or more. They are characterized by overwhelming infections which require several times the amount of serum



administered for nonbacteremic cases, and even in spite of large dosage, very often prove fatal. In a recent article Rogers and Gooch say "A reliable blood culture is now considered not only of prognostic value, but also of even greater value as a check on the accuracy of the bacteriologic diagnosis and as an index of the intensity of treatment required in any given case".<sup>19</sup> The practice of taking blood cultures on pneumonia patients should be universally adopted by all physicians.

Both horse and rabbit antipneumococcus serums are available in many areas of this country for the treatment of certain types of pneumonia. Unconcentrated antipneumococcus horse serum is almost less potent than unconcentrated rabbit serum.<sup>20</sup> For example, raw type I horse serum contains approximately 500 mouse protective units per cc. compared to 2000 units in type I rabbit serum. Felton's work led to the development of methods of refinement and concentration. Today, horse serum is concentrated by all manufacturers, and rabbit serum by some. Thus the antibody content per unit volume is markedly increased and certain reaction-producing fractions are eliminated.

It has been stated that antipneumococcus rabbit serum differs in more than thirty distinct immunologic characteristics from antipneumococcus horse serum. The most important of these are the higher potency mentioned above, and the smaller size of the rabbit antibody which presumably permits better penetration into infected tissues.<sup>20</sup> In addition, with horse serum and not with rabbit serum there occurs the prozone phenomenon in the mouse. This is described by Goodner and Horsfall as the existence of an optimal quantity of horse serum which provides maximum protection against large numbers of pneumococci. When more than this optimal amount is used of the mouse test, protection instead of being increased, is lost entirely. The optimal quantity of horse serum for human beings has not yet been determined, but probably far exceeds any amount which the average pneumonia patient is likely to receive.

Prior to the administration of serum the patient should be carefully questioned as to previous injections of serum (most commonly diphtheria and tetanus antitoxin, prophylactic or therapeutic), and as to any history of asthma, hay fever, angioneurotic edema, or vasomotor rhinitis upon exposure to horses. A positive history should serve to place the physician on guard against anaphylactic reactions. A negative history, however, does not guarantee that reactions will not occur. Every patient who is to receive either horse or rabbit serum should have both

the intradermal and the ophthalmic tests for sensitivity.

The skin tests consists of injecting 0.1 cc. of 1:100 dilution of serum intradermally. A positive reaction is indicated by the appearance within fifteen to thirty minutes of a wheal and erythematous area, sometimes with pseudopodia, at the point of injection. The eye test consists of placing in the conjunctival sac one drop of 1:10 dilution of the kind of serum to be used therapeutically. The test is positive when there is development of conjunctivitis, lachrimation, and itching in fifteen to twenty minutes. A positive skin or eye test indicates to the physician that administration of serum to the patient is apt to be hazardous. Lord and Heffron state that a positive eye test is an absolute contraindication to the use of serum.<sup>21</sup> However, Rogers recently reported that evidence of anaphylaxis did not appear following administration of serum in all cases with positive ophthalmic or intradermal tests. He found that the converse was also true, that evidence of anaphylaxis did appear in certain cases with negative eye or skin tests.<sup>19</sup> Negative tests therefore, do not guarantee freedom from reactions, and positive tests do not always mean that serum cannot be given. Positive tests will, however, reveal to the physician that group of patients in whom severe reactions are more apt to occur, and he may be better prepared to cope with them if they do arise.

Horsfall has pointed out that many patients show positive skin tests with normal rabbit serum, but that these are not an indication of sensitivity to rabbit serum injected intravenously. For patients who are to receive rabbit serum, therefore, an additional procedure for detecting sensitivity is recommended by some workers. This is the "blood pressure depression test".<sup>20</sup> It consists of the intravenous injection of 0.05 cc. to 0.1 cc. of rabbit serum diluted in 5 cc. of sterile physiologic saline. The pulse rate and blood pressure are taken immediately before the test and at intervals of one minute after the test. If the pulse rate does not rise more than twenty beats per minute and if the blood pressure does not fall more than 20 mm. of mercury in six to eight minutes, it is considered reasonably safe to proceed with administration of serum.

No sensitivity test should be performed and no injection of serum should be given unless the physician has at hand ready for instant use a syringe filled with fresh adrenalin solution.

It has become evident in recent years that if therapeutic serum is to be most effective it must be given early in the course of the disease. In a broth culture the capsular polysaccharide of the pneumococcus diffuses into the surrounding media, and may some-

times be detected as early as six hours after seeding. This substance gradually increases in concentration up to a certain point. Much the same thing occurs in the human patient. If the disease is permitted to remain untreated, the specific carbohydrate diffuses into the tissues and constantly increases in amount. With severe cases it is even detectable in the urine. In serum therapy all of this dissolved or diffused material must be neutralized. The neutralizing action of the antibody deprives the organism of its protective capsule, without which it readily succumbs to the phagocytes. It is thus apparent why serum, if given early, before the accumulation of a large amount of the carbohydrate, is more effective and why smaller quantities will suffice to bring about recovery.

It is difficult to determine at the onset the exact amount of serum required by a patient. The dosages suggested here are used by Bullova on his service at Harlem Hospital, New York City.<sup>11</sup> If treatment is started on the third day or earlier, the average uncomplicated case of every type of pneumococcus pneumonia except type II should receive a minimum dose of 100,000 units of serum. For the type II case this dose should be 200,000 units. Complications and certain other factors may necessitate the use of two or three times the minimum. These include 1) bacteremia, 2) pregnancy or the puerperium, 3) multiple lobe involvement, 4) late treatment (after the third day), and 5) age beyond forty years.

Serum should be administered intravenously. However, it may be used intramuscularly where the size or condition of the veins make intravenous therapy difficult or impossible. Serum is given in large doses and at frequent intervals in order to secure the maximum concentration of antibody in the patient's blood in the shortest possible time. Horsfall has treated pneumococcus pneumonias with single injections of several hundred thousand units of type specific rabbit serum and has had excellent results. Some of his patients have had their crises a few hours after such treatment.<sup>20</sup> Although it might be difficult to carry out this procedure in private practice it is, nevertheless, frequently possible to give the entire amount of serum necessary in two to four doses and within a total elapsed time of six to eight hours. The individual injections of serum may vary in volume from 10 to 50 cc. because of differences in the potency of the lots, but it is well not to exceed 50 cc. at any one dose.<sup>14</sup>

It is customary practice on some large pneumonia wards to limit the initial therapeutic dose of serum to 2 to 5 cc.<sup>11</sup> A large eastern state actively engaged in pneumonia control activities advises its physicians to limit the first injection to 1 cc. of serum, diluted

to 10 cc. with normal saline solution, and administered very slowly. The giving of these small preliminary doses serves as an additional precaution against reactions, and is sound practice. The time interval between subsequent doses should not be more than one to two hours.

If the serum has failed to bring about a crisis twelve to eighteen hours after the last dose, a bacteriological reexamination of the patient is imperative. The sputum should be retyped to rule out the possibility of an error, and the blood culture checked. Occasionally, it has happened that a patient received a large amount of, say, type VIII serum with no apparent benefit. Examination of the blood culture revealed, for example, pneumococcus type V as the real offender. Type VIII serum could not be expected to influence type V bacteremia.

Reactions following the use of unconcentrated and unrefined antipneumococcus horse serum were altogether too frequent and occasionally alarming. The concentrated and refined serum available today is much more potent and does not cause as many reactions. They still occur, however, and may be described as anaphylactic, thermal or chill, and serum sickness.<sup>7</sup> The anaphylactic reaction is due to hypersensitiveness on the part of the patient to foreign protein and is in no wise related to the antibody content of the serum per se. It occurs within thirty seconds to two minutes, or somewhat longer after the intravenous injection of serum. It may be the "guinea pig" type characterized by respiratory distress, asthma, dyspnea, cyanosis, together with a sense of constriction in the chest, and occasionally with incontinence; or it may be the "dog" type with backache, and accompanied by more or less shock and circulatory collapse. If the reaction is not too severe, it may be controlled by immediate discontinuance of the serum and prompt intramuscular injection of 0.5 cc. of 1:1000 solution of adrenalin. Fatal anaphylactic reactions are observed only about once in every 50,000 injections of serum. If the precautions outlined above are carefully followed the probability of a fatal reaction will be extremely remote. No patient should be denied the benefit of serum because of fear of an anaphylactic reaction.

The thermal and chill—sometimes called the delayed reactions—are imperfectly understood. They occur about one hour after serum has been injected and are characterized by a moderate or severe self-limited chill of twenty to forty minutes duration. The chill may some times be aborted by allowing the patient to inhale crushed ampules of amyl nitrite or by slowly injecting intravenously ten cc. of ten per cent calcium chloride. Following the chill the temperature rises to 105 degrees F. or 106 degrees F.



In exceptional cases the temperature may go to 108 degrees F., and in one fatal case at Harlem Hospital it reached 110 degrees F. Only if it rises 106 degrees F. need specific steps be taken to lower it. These may include ice water enemas and cool water or alcohol sponges. An effective measure in combating hyperpyrexia is to strip the patient, cover him with a wet sheet, and permit the wind from an electric fan to blow upon him.<sup>11</sup> The evaporation of the water with its cooling effect will bring about the desired result. Subsequent injections of serum should not be withheld because of fear of further reactions. If, however, the chill was violent and the fever rose to an alarming degree, the physician may wisely discard that particular lot of serum in favor of another. With the refined and concentrated serums available today severe thermal reactions are not frequently encountered, occurring in only about five per cent of the cases.

Serum sickness is in all probability related to the total amount of serum which the patient has received, and is a reaction to the foreign protein. It occurs about one to two weeks after serum administration and is characterized by elevation of temperature, joint pains, urticaria, and pruritis. These occur singly or in combination and may be distressing or so mild as to be almost overlooked. If joint pains make the patient uncomfortable, codeine and aspirin are sufficient to give relief. Adrenalin, ephedrine, and calamine lotion are sometimes necessary to control the urticaria and itching. The physician should realize that serum sickness may cause elevation of temperature, but he must guard against attributing to this cause all such rises occurring during convalescence. Careful reexamination is required to exclude the possibilities of delayed resolution, empyema, otitis media or some other complication.

There can no longer be reasonable grounds to doubt the efficacy of specific serum therapy in the treatment of pneumococcus pneumonia. The employment of this agent demands on the part of the physician precise knowledge of the etiology, familiarity with the technic of sensitivity tests and of intravenous therapy, appreciation of the factors governing dosage, and understanding of serum reactions to be expected and of methods for their control. If the physician will apply these concepts to his own practice, he will soon learn from personal experience what many workers have already proved: that early adequate use of specific serum will shorten the duration, reduce the number and severity of complications, and lower the mortality of this serious and frequently fatal disease.

#### REFERENCES

1. Washburn—British M. J. 1897, P. 512.
2. Fanoni, Antonio—New Treatment of Pneumonia with De Renzi's Serum. N. Y. Med. Jour., May 7, 1898, P. 646-648.

3. Fanoni, Antonio—Report of 6 cases of Pneumonia Treated with Antipneumococcic Serum. N. Y. Med. Jour. Vol. IXX, 1899, P. 302-306.
4. Lambert, Alex.—Use of Antipneumococcic Serum. J.A.M.A. Vol. XXXIV, 1900, P. 1777-1781.
5. Anders, J. M.—Serum Treatment of Pneumonia. J.A.M.A. Vol. XI—1904 P. 1777-1781.
6. Locke, Edwin A.—The Serologic Treatment of Lobar Pneumonia. Boston M. & S. Jour. Vol. 190, No. 6, Feb. 7, 1924, 196-203.
7. Osler, William—Principles and Practices of Medicine. Appleton and Co., New York. 8th Edition, 1912.
8. Avery, O. T., Chickering, H. T., Cole R., and Dochez, A. R. Monographs of the Rockefeller Institute for Medical Research, No. 7, 1917, New York.
9. Felton, Lloyd D. A Study of the Isolation and Concentration of the Specific Antibodies and Antipneumococcus Serum. The Boston Medical and Surgical Journal, 190: 819-825, May 15, 1924.
10. Cooper, G., Rosenstein, C., Walter A., and Peiser, L. The Further Separation of Types among the Pneumococci hitherto included in group IV and the Development of Sera for these Types. J. Exper. Med. 55: 531-554, April, 1932.
11. Bullowa, J. G. M. The Management of the Pneumonias. Oxford University Press. New York, 1937.
12. Reimann, Hobert A. The Pneumonias. W. B. Saunders Co., Philadelphia. 1938.
13. White, Benjamin. The Biology of Pneumococcus. The Commonwealth Fund. New York. 1938.
14. Sabin, A. R. The Microscopic Agglutination Test in Pneumonia. Jour. Infectious Dis. 1930, 46: 469-484.
15. Armstrong, Richard R. A Swift and Simple Method for Deciding Pneumococcal "Type." Brit. M. J. I: 214-215, Feb. 7, 1931.
16. Armstrong, Richard R. Immediate Pneumococcal Typing. Brit. M. J. I: 187-188, Jan. 30, 1932.
17. Logan, W. R. and Smeall, J. T. A Direct Method of Typing Pneumococci. Brit. M. J. I: 188-189, Jan. 30, 1932.
18. Sabin, A. B. Immediate Pneumococcus Typing Directly from Sputum by The Neufeld Reaction. J.A.M.A. 100: 1584-1586, May 20, 1933.
19. Rogers, E. S. and Gooch, M. E.—Type I Pneumococcus Pneumonia. New York State J. of Med. 38: 1369-1375, Nov. 1, 1938.
20. Horsfall, F. L., Goodner, Kenneth, MacLeod, C. M., and Harris, A. H. Antipneumococcus Rabbit Serum as a Therapeutic Agent in Lobar Pneumonia. J.A.M.A. 108: 1483-1490, May 1, 1937.
21. Lord, Frederick T. and Heffron, Roderick—Pneumonia and Serum Therapy. Revised Edition—1938. The Commonwealth Fund, New York, 1938.

## VARIOUS MANIFESTATIONS OF CEREBRAL ARTERIOSCLEROSIS\*

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Because of the increased longevity of life resulting from many recent therapeutic discoveries in medicine, the general medical man has many more problems concerned with diseases of old age. Predominant in this group are the manifestations of arteriosclerosis including their secondary effects upon the nervous parenchyma. A cogent example of the increase in diseases of the nervous system due to arteriosclerosis is found in the recent statistics of state hospital admissions. These show that there has been a marked increase in psychoses admitted to state hospitals in the last two decades not due, as some have felt, to an absolute increase in insanity but to a great relative increase in the organic psychoses to which cerebral arteriosclerosis is a major contributor. It therefore becomes necessary for the

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general practitioner to have a familiarity with the various types of intracranial disease caused by senile vascular degenerations.

An almost unbelievable number of patients of middle age and older seek the services of their physician because of headache, dizziness and faintness, especially severe on sudden shifting of the position of the head in relation to gravity. Suddenly getting up from a reclining position or stooping to grasp an object produces attacks of faintness and dizziness which may even reach the intensity of true vertigo with whirling of objects about the patient or a sensation of spinning in space and actual fainting. Further inquiry may elicit the presence of head noises simulating the escape of steam in jets, or throbbing or hammering, usually synchronous with the pulse. Such individuals may show physically nothing more than a moderate thickening of the retinal arteries and perhaps some palpable peripheral arteriosclerosis. On the other hand, a deficiency in memory or an increase in nervous irritability may be remarked by members of the family and is referable to sclerotic changes in the vessel walls which, by reducing the blood supply, may interfere with the nutrition of the ganglion cells resulting in a moderate decrease in cerebral efficiency.

The transient symptoms are due, however, to another cause. The arteriosclerotic vessels are rigid and vasomotor influences are less potent in influencing the vascular caliber, so that alterations in cerebral circulation become dependent upon changes in the amount of blood elsewhere within the body. When the patient arises suddenly the intracranial venous pressure is decreased, which results in a hastening of blood flow through the capillary bed. Normally the result is a reflex dilatation of the arterioles, but when sclerotic they are rigid and fixed so that the capillary pressure drops and a temporary cerebral anemia ensues, resulting in dizziness and faintness. Later the general vascular tone of the body compensates and indirectly readjusts the circulatory alteration. The distressing symptoms of dizziness and faintness are benefited by the administration of moderate doses of sedatives such as bromide or phenobarbital. Although the process continues unabated, the patient experiences relief from the subjective sensations.

Another manifestation of disturbance of the intracranial circulation due to arteriosclerosis may occur when the patient lies down rather suddenly. There results a temporary venous engorgement and increase in venous pressure. The normal contraction of the arterioles in order to decrease the blood flow through the capillary bed does not occur because of the rigidity of the vessels. Temporarily there will be symptoms of giddiness, distension and headache, all

evidences of a cerebral hyperemia. If hypertension is present at the same time, the result may be a marked increase in intracranial tension and severe long-lasting or chronic headache with vomiting. Usually the milder symptoms of headache pass off when the head is again raised.

Not infrequently generalized convulsions occur due to cerebral arteriosclerosis. We know that some cases are due to small areas of softening in the distribution of an occluded sclerotic artery which provides a source of irritation, an epileptogenous zone. Such convulsions may occur, however, without areas of softening, due just to the above described mechanism which produces cerebral hyperemia. In these cases caution as to sudden change of position of the head and appropriate doses of anticonvulsants such as phenobarbital may give symptomatic relief.

Aneurysms of the intracranial vessels are extremely uncommon although an increasing number are being discovered. The majority occur at the bifurcation of the large branches of the circle of Willis and are due to congenital weakness of the media. Other rarer forms are due to syphilis, mycotic emboli and trauma. The remaining type, which I wish to discuss here, are aneurysms occurring in arteriosclerotic vessels and which are preceded by atheromatous degeneration in the form of plaques. These aneurysms are very small and occur anywhere in the course of the vessel. Their importance lies in the fact that they press upon and disturb the function of various cranial nerves which pass over or under the large trunks of the circle of Willis. In elderly individuals we frequently see suddenly developed lesions of the third, fourth, fifth, sixth and eighth cranial nerves. These disturbances are referable to arteriosclerotic aneurysms or plaques pressing upon the corresponding nerve.

The onset of the syndrome is usually sudden, although severe headache may serve as a warning. On the other hand, the patient may awaken in the morning with a fully developed syndrome. There is never any loss of consciousness or epileptic seizures. The condition is usually limited to one cranial nerve and is rarely bilateral except in the case when both internal carotid arteries are arteriosclerotic and press against each lateral border of the optic chiasm producing a binasal hemianopsia. Oculomotor involvement results in paralysis of the extrinsic muscles of the eye, with the exception of the external rectus and superior obliques, dilatation of the pupils and often ptosis. When the sixth nerve is involved an external rectus palsy occurs. A fourth nerve involvement results in a superior oblique paralysis. Pressure upon the eighth nerve results in tinnitus and vertigo with severe subjective symptoms of nausea, vomiting, staggering and often nystagmus. The trigeminal



nerve may be implicated, resulting in pain in the face or sometimes numbness. It is still an undecided question whether tic douloureux or trigeminal neuralgia even in younger individuals is caused by pressure of a blood vessel against the gasserian ganglion.

The condition usually improves gradually and often completely recedes. In some patients recovery is only partial. The suddenness of the lesion may be due to the development of a new atheromatous plaque or a new degeneration or infiltration in the vessel wall. The close relationship between the blood vessels at the base of the brain and the various cranial nerves implicated in cerebral arteriosclerosis has been studied and the individual arterial-nerve relationships pointed out in a recent paper by Grinker and Reich.

In many cases of cerebral arteriosclerosis there is a marked involvement of the small arterioles, which results in rather diffuse changes throughout the gray cortex. However, in the same individual larger vessels may be sclerotic and produce large softenings as complications of the more important generalized tissue damage. The pathology consists in a marked thickening of the leptomeninges and a severe atrophy of the gray matter of the brain, most pronounced in the frontal lobes. In the brain itself there are large areas of atrophy of the ganglion cells which show the typical changes due to ischemia. There is a marked loss of cells in many layers of the gray cortex. The thickened arterioles are surrounded by areas of atrophy.

The symptoms aside from mental deterioration are variable. Often generalized or focal attacks of epilepsy may occur, marked tremors of the hands and face, and a general increase in reflexes may be noted.

The severe chronic pathologic brain disturbances are responsible for a type of "organic syndrome," often referred to as a "defect psychosis" because of the actual loss or defect in mental function. In these organic psychoses the onset is usually gradual and insidious. The personality changes involve first the highest cognitive-intellectual functions. At first there is a diminution in the ability to carry out complicated mental tasks; thinking becomes slower and more difficult, ideas are elaborated less well, and the ability to grasp and comprehend becomes impaired. Impaired memory, especially for recent events, and difficulties in retention become apparent. As a result of the impairment of these cognitive functions a change in the total personality of the individual develops. He becomes inefficient, forgetful and has difficulty concentrating. He shows poor judgment not only in his business activities but also in his relations with other people. A distinct change in affectivity takes place consisting of a freer expression

of the emotions, due to a loss of the ordinary inhibitions. This loss of inhibition permits ready and usually excessive emotional reactions to even trivial occurrences, rapid mood swings without apparent cause, and a state of emotional instability in which irritability and quick anger, laughter and crying, and emotional outbursts figure prominently. As one would expect, antisocial self-assertive, aggressive, hostile and sexual feelings, ordinarily suppressed or inhibited, are frequently expressed and, depending upon their force and the degree of impairment of judgment, may be acted out. Thus there is a sacrifice of the finer social feelings, with a deterioration of the ordinary ethical and moral standards and a progressive loss of interest in everything except the gratification of the personal cravings. The severity of the personality changes described above depends upon the extent of the destruction of brain tissue. In mild cases there may be only slight intellectual impairment with little or no social and ethical deterioration, while in severe cases there may be an almost complete loss of the intellectual functions, resulting in severe deterioration of the personality. Pathologic content not infrequently occurs in these organic states, especially paranoid trends, hypochondriacal delusions and delusions of grandeur. The character of the pathologic content is determined not by the organic brain disease but by psychogenic factors, the prepsychotic personality make-up and the patient's deeper emotional needs, strivings and conflicts. Sustained affect disturbances, in keeping with the abnormal content, are frequently seen, such as the elation of a grandiose parietic or the depression of a hypochondriacal or paranoid senile.

The course of the psychosis depends upon the course of the underlying brain disease. In the large majority of cases the structural brain damage is irreversible, so that there is a permanent and usually a progressive loss of function. In these cases there is a gradual decrease in the intellectual functions, resulting in a progressive deterioration of the personality, ending, in many cases, in a state of complete dementia. In other conditions, in which the disease process can be arrested or considerably improved, there may be a marked improvement in the psychotic manifestations.

In most cases the diagnosis of this type of organic psychosis presents little difficulty because of the conspicuous intellectual impairment, the type of personality change, the absence of dominant mood or content abnormality, and the evidence of organic brain disease. The tremor must be differentiated from general paresis by serological examination. The convulsions may suggest a brain tumor which should be investigated by looking for choked disc and determining the intracranial tension. The positive

signs of peripheral arteriosclerosis and retinal sclerosis are usually present.

A condition which is rather frequent and which must be sharply differentiated from the above described, serious, irrecoverable psychosis occurs in elderly individuals who may or may not have cerebral arteriosclerosis. We have found that when elderly people are put in bed or confined because of mild illness or for operations, a psychosis of a rather dramatic type ensues. The general condition is not sufficiently serious to produce a toxic psychosis and yet the patient is in a delirious, confusional state, with marked disorientation and uncooperativeness. The restriction of activity of these elderly people results in a peculiar psychological regression which is somehow associated with inactivity and sleeplessness. Proper sedation and return to ordinary mode of life after recovery from the general illness, such as mild bronchitis, etc., results in complete alleviation of the psychosis. The patient is not deteriorated and hence has not suffered from the tissue ganglion cell degeneration described above due to cerebral arteriosclerosis.

Not infrequently personality disorders occur early in the course of organic brain conditions, before the appearance of the typical intellectual defect or the neurologic signs. Such symptoms as a subjective feeling of loss of energy, reduced efficiency, fatigability, mild emotional changes (especially irritability, moodiness and various forms of "nervousness"), and hypochondriacal complaints may be the first signs of an organic psychosis. It is for this reason that careful physical, neurologic and laboratory examinations are essential before a diagnosis of a functional psychosis or a neurosis is made. The form of the psychosis may be misleading, especially when there is an unusually prominent content disorder or a dominant mood disturbance, preventing satisfactory testing of the intellectual functions. In these cases organic neurologic findings usually enable one to make the proper diagnosis. It must always be kept in mind that an individual with organic brain disease can also develop an unrelated functional psychosis.

At the base of the brain the extrapyramidal motor nuclei receive their blood supply from small branches of the circle of Willis which come off at right angles to the main trunks and penetrate the basal gray substances. The efficiency of the circulation of these ganglia and the extent of the collateral circulation is not great hence in cerebral arteriosclerosis it is these basal structures that are so frequently affected, producing the clinical syndrome of the extrapyramidal motor nuclei. This has been termed arteriosclerotic muscular rigidity or arteriosclerotic Parkinsonism. The clinical picture is characterized by rigidity, fixed facial expression and short-stepping gait. The latter

may appear alone. The more severe type has, in addition, dysarthria, dysphagia and spontaneous laughing and crying, with signs of a double hemiparesis due to involvement of both internal capsules adjacent to the extrapyramidal motor nuclei. Another type of Parkinsonian rigidity, sometimes with tremor, is associated with mental deterioration.

One need not go into the clinical description of the Parkinsonian position and gait except to accentuate the fact that the rigidity is extremely severe and the tremor is usually absent as contrasted with the Parkinsonism due to encephalitis or senility. The treatment of this Parkinsonian syndrome is the same as any other, namely, with hyoscine and stramonium.

Another type of involvement of the deeper structures is known as the chronic subcortical encephalopathy in which the arteriosclerosis affects the deep white matter but leaves the gray matter intact. The onset is slow and insidious with progressive impairment of memory and severe mental deterioration. Attacks of dysarthria, vertigo and epilepsy complicate the picture. All sorts of signs of focal cerebral damage are present. The predominance of focal signs with insidious onset differentiates this condition from involvement of the cortex and from thromboses of the large blood vessels.

Among the so-called apoplexies, or what the lay people call "strokes," cerebral arteriosclerosis plays an extremely important role. A rather sudden shutting off of blood supply of a large blood vessel is associated with an ischemia of the tissue and subsequent necrosis. The brain tissue is very sensitive to changes in its blood supply and even a temporary occlusion of a large vessel will result in softening. The softening is often incomplete at the periphery of the involved area, due to collateral circulation, and also in the neighborhood of the softening a vascular reaction of hyperemia and edema occurs, hence the clinical manifestations of an obstruction of a large blood vessel are always far greater than what would correspond to the actual area destroyed. The structures innervated by the surrounding tissues are thrown out of function due to the temporary interference with nervous conduction. Furthermore, the suddenness of the destruction results in a shock-like reaction which puts out of function many areas of the brain which are connected with the softened area. This too results in a temporary increase in the symptomatology. In cerebral thrombosis the onset may be very sudden but more frequently it is gradual, in fact, much more gradual than in hemorrhage. The incidence of onset with unconsciousness speaks twice as much for hemorrhage as for thrombosis, and headache is less often a premonitory symptom. On the other hand, patients with cerebral thrombosis



usually have frequent warnings for some time prior to the onset of the cerebral insult in the form of dizziness, transient weakness and some changes in memory. The most frequent area of distribution of arteriosclerotic softenings is in the area supplied by the middle cerebral artery involving the internal capsule and the adjacent basal nuclei. The effect of the occlusion is a softening and from the actual softening no recovery is possible. Any recovery which results in the course of time is due to the return of function from recovery of shock and from removal of edema and reactive hyperemia about the lesion. This phase of restitution is slow and may take some weeks or months. It is followed by a phase of reorganization in which the patient learns to use accessory mechanisms to fulfill the lost function and in younger individuals some learning process goes on intracerebrally.

An important point must be stressed at this time, namely, that hypertension, even as high as a systolic of 220 mm. of mercury does not necessarily mean that hemorrhage has occurred. The diagnosis of hemorrhage is not based upon the height of the blood pressure. Even though there is a marked hypertension, a gradual onset, an absence of headache and absence of unconsciousness, often the discovery of functional disorder in the morning on awakening indicates thrombosis.

It must not be supposed that cerebral arteriosclerosis is not associated with hemorrhage into the brain. With or without hypertension it may result in hemorrhage, the pathogenesis of which is still disputed. According to some, a preliminary softening weakens the vessel walls and causes their rupture. Others believe that small atheromatous aneurysms rupture, while still others believe that vascular spasm is an important factor. The most recent concept is that, following an ischemia and stasis of blood flow, a diapedesis of blood cells occurs through vessels with increased permeability and coalesces to form large hemorrhages. The attack in cerebral hemorrhage is usually sudden, following exertion. Vomiting and unconsciousness occur frequently; convulsive movements and signs of cortical irritation are very frequent. The prognosis in hemorrhage is much more serious than in thrombosis. Marked change in body temperature is more indicative of hemorrhage. The pressure of the cerebro-spinal fluid is increased and in hemorrhage (in about seventy-five per cent of cases) the fluid is bloody. Fifty per cent of the cases of hemorrhage die within four days after the onset. Hemorrhages are usually in the deep white matter, quite extensive and many either rupture into the ventricle or to the surface of the brain.

The focal symptoms caused by cerebral arteriosclerosis depend a great deal upon the area involved.

It is a fact that almost any area in the brain may be softened, resulting in syndromes well known to occur from lesions of the cortex, subcortex, brain stem, etc. To indicate all of these syndromes would be to discuss the whole of neurology. These syndromes are due to a particular pathological process and must be differentiated from lesions produced by other well-known clinical entities. The clinical manifestation of loss of function in itself does not make for a diagnosis of cerebral arteriosclerosis, but the onset, the age of the patient, the presence of vascular disease, the frequent multiplicity of lesions and the course all help in making a pathological diagnosis of foci of arteriosclerotic softening. The most frequent syndrome of all is the well-known capsular hemiplegia. The importance of knowing the general symptoms and signs of intracranial tumor is obvious because in this type of pathological process, operative interference is urgently necessary. Headache, vomiting and choked disc are not always clinically present, therefore a person of middle age developing a hemiplegia or an aphasia or other evidence of focal disturbance must be considered as a tumor suspect even without the presence of signs of increased intracranial tension, and the possibility of using air studies for differential diagnosis strongly considered.

I have by no means covered the subject of cerebral arteriosclerosis but have attempted to give the salient points and to indicate the problems of differential diagnosis. Therapy is limited, inasmuch as vascular lumina cannot be remade and destroyed tissue is impossible of regeneration. Symptomatic remedies for annoying subjective symptoms are the only means of therapy at our disposal. Efforts to increase the circulation in cases of cerebral arteriosclerosis with signs of slowing of the circulation should be instituted. However, above all, the type of disturbance which cerebral arteriosclerosis so frequently causes should be borne in mind when the diagnosis in a person beyond middle age is considered.

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A decalogue of cancer, suggested by the Weekly Roster and Medical Digest recently:

- "1. Thou shalt keep abreast of knowledge.
2. Thou shalt not neglect regularly-timed health examinations.
3. Thou shalt not allow chronic irritations to continue.
4. Thou shalt not neglect sores, discharges, lumps, warts, moles, etc.
5. Thou shalt not give way to fear—BUT
6. Thou shalt have a diagnosis—and above all
7. Thou shalt not listen to 'old wives' tales or to well-meaning but misinformed persons.
8. Thou shalt not consult quacks.
9. Thou shalt encourage and help research.
10. Thou shalt not DELAY."

## THE TREATMENT OF CARCINOMA OF THE COLON AND RECTUM\*

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Most of the literature concerning the surgical management of lesions of the colon and rectum comes from one of the larger clinics, or hospitals, where the authors have ample opportunity to see and study many of these cases. From their study, they are able to give the profession their findings through the many fine medical publications. In this way, men less fortunately situated are able to follow their teachings. All the credit for our present ability to advise and treat correctly patients afflicted with carcinoma of the colon and rectum must go to the pioneers in this field.

In every community, we have people suffering with malignant growths of the colon and rectum who, for personal or economic reasons, do not want to leave their homes for treatment. Every one of them deserves as good a possible chance for his life and a successful outcome as can be obtained anywhere. All of this can be made possible in every locality by the proper study and care of each individual case by the surgeon responsible for it. Every general surgeon should qualify himself so that he is capable of dealing with lesions of the colon. Perhaps a review of our small group of cases and a free discussion, with you, of our difficulties may help us all in handling these cases (Tabulation). The more the subject is publicized, the sooner the public, as well as the profession, will become familiar with the symptoms of beginning cancer and, therefore, earlier advice will be sought and the diagnosis will be made when surgical treatment can give more hope for permanent cure.

Owing to the limitation of time, no attempt will be made in this presentation to discuss the diagnosis of malignant lesions of the colon. We will take it for granted that the diagnosis has been made and the patient hospitalized in preparation for surgery.

The preoperative care is one of the most important steps to a successful outcome of any case. The treatment is directed along certain definite lines which have to do with, first, the decompression of the colon; second, the rehabilitation of the patient; and third, building up the patient's resistance to infection.

Most all patients with carcinoma of the colon,

except in the cecum and the ascending colon where the growths are broad and flat and the fecal current is liquid, present themselves to us with a greater or lesser degree of obstruction, either acute, subacute, or chronic.

In acute, subacute, or chronic obstruction of the bowel, our first efforts must be directed toward decompression of the colon. A great deal has been done recently in the handling of any case of intestinal obstruction. We do not now consider this type of case as an emergency unless gangrene of the bowel is imminent. In the most stubborn cases the patient may be made fit for operation by the use of constant duodenal drainage with intravenous administration of saline and glucose and decompression of the colon by enemas. The use of oil, saline, or hypertonic salt enemas may start the gas and fecal current through a small opening. Hot packs over the entire abdomen will help the circulation in the bowel wall to some extent, which will in turn increase peristalsis. Hot packs are soothing to the patient. A good understanding nurse with patience and care, if properly directed, will eventually bring the bowel into fairly normal function in most cases. The patient can then be given a high carbohydrate non-residue diet. Fluid extract of senna may be administered to keep the bowel movements soft and more or less liquid. The surgeon need not be in a hurry to operate as the patient's condition is being improved by building up the glycogen reserve in the liver. Proper preoperative preparation usually takes from four to seven days.

The question of building up the patient's resistance to infection by intraperitoneal vaccination has not been settled. Some men, doing this type of work, think it reduces the mortality rate appreciably, while others do not seem to have that much faith. We have used vaccination several times and it seems to us that the morbidity and mortality are less. At any rate, we are convinced to such an extent that we have decided to use it in all bowel work in the future. One cubic centimeter of a vaccine made of dead streptococci and colon bacilli is injected into the peritoneal cavity through a blunt needle about twenty-four to thirty-six hours before the time set for the operation.

Cathartics are not given for twenty-four hours previous to operation and one to two drams of paregoric is given at 2:00, 4:00, and 10:00 p.m. the day preceding operation. The colon is thoroughly emptied by repeated enemas the night before and again just before the patient is taken to the operating room. Any remaining liquid should be siphoned off in order to be sure that the bowel is clean and empty. Morphine sulphate, one-sixth grain and atropin sulphate,

\*Read before the Ford County Medical Society, Dodge City, Kansas, February 10, 1939.



1/150 grain are given one-half hour before the operation.

The anesthetic should be selected to fit the patient. Any of the various types of inhalation anesthesia may be used provided the obstruction is not complete; in which case, spinal anesthesia is indispensable. It is probably better in these cases to accept a slightly increased risk by using spinal anesthesia than it is to subject the patient to possible aspiration pneumonia by the use of any inhalation anesthesia. We consider an extremely high or extremely low blood pressure, in aged persons, to be contraindicated to the use of spinal anesthesia. The majority of operations can be safely completed with spinal anesthesia supplemented by cyclopropane gas, if they are not prolonged more than an hour.

The type of operation to be used will depend upon the presence or absence of obstruction; the presence or absence of metastasis; the presence or absence of complication; the situation of the growth; the pathological type of the growth; the general condition of the patient; and the experience and judgment of the surgeon.

Complete obstruction of the bowel, which will not respond to ordinary decompression measures, must be relieved by some sort of a colostomy proximal to the site of the obstruction. Cecostomy is a good procedure and carries with it very little additional risk.

Demonstrable distant metastasis precludes radical resection except for palliation. Biopsy of an enlarged supraclavicular gland on the left side of the neck may show that distant metastasis has already taken place. Exploration, systematically done the first time the abdomen is opened, may disclose metastasis to the liver or to glands along the spinal column or along the iliac vessels in the pelvis. Enlarged glands should be considered inflammatory until they are proved to be malignant by a good pathologist. Many patients with operable growths are, no doubt, refused radical resection because the glands draining an infected ulcerating growth were enlarged and, therefore, considered malignant.

Certain complications may prevent a radical surgical removal. The growth may have penetrated other vital organs such as the stomach, pancreas, gall-bladder, or ducts, in which case removal would be too time-consuming and the risk too great.

Growths in the cecum, ascending colon, hepatic flexure, and the right half of the transverse colon are probably best handled by a resection of the right half of the colon in one or two stages and a ileocolostomy. Exclusion of the growth by doing an ileocolostomy may make what at first seemed to be an inoperable growth change into one that is resectable. By placing that portion of the bowel at rest, infection in the glands will subside and a growth that is firmly

fixed, at the first operation, may become mobile and safe to remove at a later time.

Resection of growths in the right half of the colon seems to carry a low mortality and a good chance for a permanent cure. The normal continuity of the bowel is always reestablished and the patient is no worse off than after any intra-abdominal operation.

Growths distal to the middle of the transverse colon down to the rectosigmoid juncture are best handled by a two or more stage operation using some sort of an exteriorizing modifide Mikulicz procedure. We find that the obstructive resection as described by Rankin to be very useful. It permits radical resection of the growth along with the glands of the mesentery and eventually reestablishes the normal continuity of the bowel. A one-stage resection of the growth and end-to-end or side-to-side anastomosis are not in keeping with a low mortality rates as much as we would like to do it all at once and save the patient suffering as well as for economic reasons.

Growths in the rectosigmoid are too low for an anterior resection and too high for posterior resection. Some type of a combined abdominoperineal operation must be used. Local excision of the growth followed by an end-to-end anastomosis is probably not radical enough. Too often there will be local recurrence. The combined operation is quite formidable and difficult and causes the highest mortality of any surgical procedure on the large bowel. It requires a preliminary permanent colostomy.

Growths in the rectum must be radically removed. A colostomy followed in a few weeks by a combined abdominoperineal or posterior resection of the rectum are the methods of choice. Posterior resection of the rectum for carcinoma carries the lowest mortality for any surgical malignant lesion of the colon.

The pathological type of the growth will help the surgeon to decide on the proper procedure in a given case. Growths in the last twenty to twenty-five cm. of the bowel can be seen through the proctoscope and a specimen taken for pathological examination. According to Broders' classification, most of the carcinomas of the colon fall into grades one or two. They are very slow-growing and slow to metastasize. The results as to five-year cures are good. The growths falling into grades three and four are more rapid in development and the prognosis as to permanent cure from any method of treatment is not good. These patients are probably better if they are given palliative treatment by irradiation.

The general condition of the patient may influence the treatment somewhat, for example, a growth in the lower portion of the sigmoid might best be handled by a combined abdominoperineal operation, but

if the patient is old and a very poor risk, it is better to subject him to the least possible shock, which would be a colostomy followed by a posterior resection. The experience and judgment of the surgeon will have a definite bearing on the outcome of these cases. Good judgment will, at least, tell us when to quit.

The postoperative care is similar to that of any major surgical procedure. Morphine is given every four hours or until the respiration is reduced to sixteen per minute. Enough saline, or saline and glucose, is given intravenously or subcutaneously to bring the total intake in twenty-four hours to 3,000 c.c. or more. Blood transfusion is given routinely by some surgeons. We do not hesitate to use blood transfusions, either before or after the operation when, and as often, as indicated. Carbon dioxide is given for one minute every half hour for twelve hours. The patient is encouraged to take deep breaths frequently. The extremities are moved and massaged often. The mouth is kept moist in an attempt to prevent parotitis. A rectal tube is inserted at least three times a day in order to remove gas.

Constant duodenal siphonage is started as soon as any sign of gastric retention is noted. The semi-Fowler position is the most comfortable for the patient as soon as he is awake, or the results of the spinal anesthesia have passed away.

This postoperative program is continued for from three to seven days or longer if necessary. When the temperature approaches normal, fluid and food may be given by mouth.

Patients who are so unfortunate that they must have a permanent colostomy can be made clean and comfortable by the proper management of their diets and a proper fitting belt or colostomy bag. Several of our patients allow their bowels to move every morning and then wear an elastic belt with an extra pad over the colostomy until time for the next evacuation. There is no odor about these people and they take part in society as normal individuals.

In summary, we may say that early diagnosis and early treatment of patients with malignant growths of the colon and rectum will materially reduce the morbidity and the mortality which will lead to more permanent cures. These cases can be handled successfully by any well-qualified general surgeon working in a well-equipped hospital. Attention to details is especially important in this field of surgery.

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In illness the physician is a father; in convalescence, a friend; when health is restored, a guardian.—Brahmanic Proverb.

## ACUTE LEUKEMIA AND ERYTHREMIA

Michele Gerundo\*

Topeka, Kansas

### SUMMARY

A division of leukemias commonly found and still accepted by the majority of the hematologists are the classical, acute and chronic types. However, in leukemias there is a perfect accord between the cellular type, the degree of maturity and the duration of disease. A leukemia which is turning to a more rapid course rejuvenates the formula, indicating that more and more immature elements are entering the blood stream. The classification adopted in this paper is as follows:

1. Hemohistioblastic and hemocytoblastic syndromes.
2. Myelosis: Leukemic (myeloblastic, myelocytic)  
Erythremic  
Erythroleukemic (with or without megakaryoblasts).
3. Lymphadenosis: Lymphoblastic  
Lymphocytic.
4. Reticulo-endotheliosis: Monoblastic  
Monocytic.

The more juvenile forms of cells correspond to the acute and subacute cases and it can be seen that the chronic forms also are well represented by the myelocytic, lymphocytic and monocytic types.

Leucopenic Leukemia—This rare syndrome has been the object of various publications. There has been a certain confusion of these conditions and various names of aleukemic leukemia, pseudo-leukemia, aleukemia, have been given in the past.

A certain confusion is raised also by the presence of tumors with leukemic findings, although it must be taken into consideration that nodular formations are not tumors in the strict sense but localized hyperplasias of a systemic process.

### CASE REPORTS

Case 1—Miss Sk., nineteen years of age, noted first a lump in the left side. A blood count taken at the time showed 400,000 white cells with four per cent lymphoblasts, twenty per cent prolymphocytes, forty per cent lymphocytes, five per cent erythroblasts, six per cent myelocytes, nineteen per cent polymorphonuclears. For two years she received radiotherapy treatments with good results. Follow-

Note: The complete paper is available from American Documentation Institute, Washington, D. C., as Document No. 1299 in microfilm or photoprint.

\*Pathologist, Topeka State Hospital.



ing a mild infection, the process took suddenly a more rapid course like a pseudo-scorbutic syndrome and she died in the course of a few days. The autopsy revealed the presence of a lymphoblastic syndrome, developed upon a chronic process.

Case 2—Mr. Hut., seventy-one, hemorrhagic diathesis, purpuroid patches over the body, bleeding gums, necrotic tonsils, WBC 160,000 with sixteen per cent hemocytoblasts, twenty-six per cent myeloblasts, ten per cent neutrophile myelocytes, six per cent eosinophile myelocytes, twenty per cent micro-myeloblasts, two per cent hemohistioblasts, nine per cent erythroblasts, eleven per cent lymphocytes. The autopsy findings confirmed the presence of a myeloblastic syndrome.

Case 3—Mr. Sur., thirty-one, chills, temperature, dysphagia, and pain in the gums. Diagnosed as Vincent's, he was treated without results. Foul mouth, bleeding from ulcerated gums, 103 temperature. The autopsy revealed the presence of an hemocytoblastic syndrome.

Case 4—Mr. P. J., forty, necrotic throat, petechiae, leucemides over the skin. White count, 4,700, with forty-two per cent small lymphocytes, twenty-three per cent large lymphocytes, four per cent lymphoblasts, five per cent hemocytoblasts. He died two days later with ruptured spleen. The autopsy findings were those of typical leukemic syndrome although the peripheral findings were absolutely leucopenic.

Case 5—D. M. Young girl of seventeen months. Deep purple raised lesions of the gums, tongue, buccal mucosa and tonsils. WBC. 14,400 with forty per cent polymorphonuclears, forty-four per cent lymphocytes. In the course of the disease, which lasted one week, there were never any leukemic findings in the peripheral blood. At the autopsy all the organs showed a definite leukemic picture and an infection of the pharynx which may have been the cause of apolynucleosis observed during her stay at the hospital.

Case 6—Male baby, two months old. Hemorrhagic spots over the trunk, disturbances of the digestive tract. No blood counts were made during life. The autopsy findings were hepato—and splenomegaly with diffuse micropoly-adenopathy. Microscopically, the organs revealed the presence of a diffuse erythremic process.

Case 7—G.W., seventy-six years old. Loss of appetite, rise in temperature, arrhythmia, necrotic gums and pharynx, WBC. 27,000, with monocytes twenty-seven per cent and monoblasts nine per cent. Three days later the monocytes and monoblasts were seventy-six per cent. Supravital staining confirmed the finding. From the blood and autopsy findings the diagnosis was that of a monocytic leukemia.

The third leukemia is a very much disputed entity,

but notwithstanding the opposition of Naegeli, the number of reported cases are now increasing, establishing its existence as a separate syndrome.

Case 8—Mrs. A.V.D. female, age forty-one. Progressive anemia, bleeding gums and necrotic tonsils. Duration of the disease was two years. WBC. 3,000 with seventy-five per cent monocytes. The autopsy confirmed the findings of a monocytic leukemia. The course was evidently chronic.

Case 9—Mr. R. age forty-two. Loss of weight, increasing pallor, fever, followed later by an hemorrhagic diathesis with purpuroid spots and a large hematoma of the tongue and ulceration of the gums. WBC 1100 (never passed 2000 at any time during the illness). Since the concentrated smears showed a predominance of primitive erythroblasts and some megaloblasts, diagnosis of erythremia was made. The autopsy findings confirmed the findings of this very rare erythremic syndrome. Described first by Di Guglielmo, there are now only twenty-four cases on record.

Etiopathogenesis of leukemia—The constitutional theory, the bacillary findings and the tubercular nature of the leukemias are discussed and rejected. Many cases reported of streptococcic infections were only leukemoid reactions and not true leukemias. The virus theory, according to the author, should receive more attention, because there are already enough findings to establish the hypothesis upon solid ground. The neuro-endocrine theory of Naegeli does not seem to receive enough support and experiments carried upon with endocrine preparations have not proved to be effective in experimental leukemia. Finally a comparative study is presented between tumors and leukemia. From the comparison, it is evident that leukemias are not tumors nor similar to tumors in any way, since they are systemic diseases of tissue present in every part of the body. The atypical cells of cancer are never found in leukemia, where predominate types belonging to normal tissue and to normal evolution, even in adults. The fact that cells show mitoses does not prove their malignancy, since mitoses are always present in normal bone marrow. The mitoses are never atypical in leukemia while they are almost always atypical in cancer. The leukemic infiltrations are not present, where there is no potential hemopoietic tissue, like the brain, where in no cases have been found leukemic growths inside the nervous tissue. The author rallies with the conception of Ferrata and many other hematologists of an hyperplastic process of the Hematopoietic organs. Such hyperplasia may be brought about by the action of a virus.

Mechanism of Leukopenia—After a discussion of the splenic factor, a new conception is advanced to explain the phenomenon of leukopenia with the

strict correlation between the spleen and the bone marrow. The normal functional inhibition of the spleen on the growth and expulsion of the cells from the bone marrow and hemohistioblastic nests, may be increased, producing a leukopenic state, and may suffer oscillations in capacity or rate, offering periods of complete aleukemia alternating with periods of enormous leukocytosis.

## PENTOTHAL SODIUM IN MAJOR ORTHOPEDIC SURGERY

James D. Bowen, M.D.

Topeka, Kansas

Intravenous anesthesia is not a new idea. As early as 1875 chloral hydrate was first introduced and since that time a great number of drugs have been used to produce anesthesia intravenously. Little real progress was made until 1929, when sodium amytal initiated the trend toward the barbiturates. Nembutal appeared in 1930, evipal in 1932, pentothal in 1934, eunarcon in 1935, narconumal in 1936 and very recently, sodium thio-ethylamyl.

This paper represents an attempt to review briefly the use of pentothal sodium in two hundred cases, occurring in the practice of Dr. M. E. Pusitz, Topeka.

We have no ideal, no perfectly safe anesthetic. All anesthetic agents must be considered dangerous to life; consequently, they should be given only by those trained and experienced in dealing with them. Any anesthetic must be given under carefully controlled conditions, with every precaution taken to avoid a lethal dose. The intravenous method of administering an anesthetic agent appeals to both the experienced anesthetist and the patient. None of our patients have shown any hesitancy in submitting to intravenous anesthesia.

Pentothal sodium is a potentially dangerous drug and should be administered by an experienced anesthetist. It was originally intended for short anesthetics, but we have found that in properly selected cases the anesthetic effect can be maintained with comparative safety for major surgery for long periods of time without any apparent deleterious effects. The longest we have administered pentothal in any one case was two hours using thirty c.c. of a five per cent solution.

For short operations no preliminary medication is necessary but when used a smaller amount of pentothal is necessary to obtain complete relaxation. In major surgery our patients received nembutal capsule (1) the night before operation and morphine

sulphate gr. one-eighth to one-quarter with atropine gr. 1/300 to 1/500 one half hour before operation.

One gram of pentothal sodium is dissolved in twenty c.c. of sterile triple distilled water. Only freshly prepared solutions are used since the solution is not stable.

The administration of pentothal sodium is made very slowly, about one c.c. in ten seconds until a total of three c.c. has been injected. The respiratory rate, pupillary and corneal reflexes, the relaxation of the jaw are watched closely to see if more solution is needed to obtain surgical anesthesia. The corneal reflex disappears, the pupils contract and react to light ever so slightly, and the jaw relaxes, the respirations become shallow but regular, the pulse rate changes little during the induction of anesthesia but tends to become slower as surgical anesthesia is reached. The needle is kept in the vein and the solution given in fractional doses, one-fourth to one-half c.c. throughout the operation to obtain the desired anesthesia, whether light or deep. A tank of carbondioxide and oxygen and an ampoule of coramine are kept ready for instant use in case of need. A cotton "butterfly" is placed on the patient's nose to show the respiratory rate. The chin must be held up at all times so that the airway is patent. The degree of relaxation of the jaw is a good guide as to the depth of anesthesia. When the jaw is flaccid skeletal muscle relaxation exists.

One must fully realize the possibility of serious consequences resulting from too rapid administration of the drug. The cumulative effects of the drug may appear suddenly. The signs are cyanosis, inadequate respiration, widely dilated pupils, fixed eyeballs, marked relaxation of the jaw, and lastly a feeble pulse. Should any of these signs appear the administration is stopped. Coramine one c.c. injected intravenously and carbondioxide-oxygen under pressure administered. Artificial respiration may be resorted to if necessary because pentothal is primarily a respiratory depressant in toxic doses and has relatively little direct effect on the circulatory system.

We have used pentothal in over two hundred cases during the past six months. The series includes as can be seen from the following tables all types of orthopedic cases, from minor operation such as amputations of toes to the major surgical cases such as spinal fusions. Campbell in his recent book on orthopedic surgery merely mentions the use of intravenous anesthesia but has not used it in any major surgical procedures.

The post operative shock following the administration of pentothal is materially less than that following inhalation anesthesia. Nausea is rare, and vomiting very infrequent, there is an absence of headache and restlessness. No mental confusion was



observed in any of our cases. Patients usually lose consciousness in ten to fifteen seconds. There is no psychic shock, no sense of suffocation during the induction. Our patients ranged in age from six years to ninety-six years. Children prefer intravenous anesthesia because of its ease of induction and freedom from vomiting. This feature of pentothal is especially valuable in operating on patients with spastic paralysis. These patients are extremely poor risks for any anesthetic, because they have a marked disturbance of their acid-base balance so that freedom from vomiting and immediate post-operative intake of fluids is of utmost importance. Freedom from psychic shock is also beneficial in this type of patient. In emergency operations, especially those patients brought into the hospital in shock with compound fractures, the material lessening of the operative shock, the quiet induction and the freedom from vomiting is helpful to the surgeon and a great factor of safety for the patient.

In this series of two hundred cases, about two-thirds have required major orthopedic surgery. Two spinal fusions have been done. The first patient had eight vertebrae fused, using a bone graft from the tibia. The patient was on the table forty-five minutes. The pulse varied from 90 to 106. This patient received fifteen c.c. of pentothal and was taking fluids thirty minutes after leaving the operating room.

#### SUMMARY OF CASES

Operations	Number of Cases	Age	Average Time of Operation	Average Amount of Pentothal	Average Variation of Pulse Rate Per Minute
Reduction of Fractures:					
Closed .....	30	7 to 96	31 min.	10 c.c.	8 to 18
Open .....	25	8 to 52	39 min.	16 c.c.	10 to 15
Compound .....	26	20 to 55	40 min.	17 c.c.	12 to 25
Manipulation of					
Spine .....	15	8 to 43	4 min.	8 c.c.	10 to 12
Extremities .....	3	8 to 43	4 min.	8 c.c.	10 to 12
Spinal Fusion .....	2	16 to 18	45 min.	18 c.c.	10 to 20
Infantile Paralysis .....	31	7 to 17	37 min.	18 c.c.	10 to 18
Spastic Paralysis .....	21	11 to 20	21 min.	14 c.c.	10 to 25
Osteomyelitis .....	15	12 to 46	15 min.	10 c.c.	15 to 25
Plastic Surgery .....	10	12 to 40	21 min.	15 c.c.	20 to 25
General Orthopedic .....	20	8 to 62	17 min.	16 c.c.	10 to 25
General Surgery .....	4	30 to 53	11 min.	12 c.c.	15 to 20

In conclusion I believe that sodium ethyl thio-barbiturate, when administered by a trained anesthetist is one of the most satisfactory anesthetic agents we have for major surgery.

It is easy to administer and agreeable to the patient.

It is potentially dangerous and its administration should never be attempted single handed.

The solution should be injected at a slow and uniform rate. Complete relaxation can usually be maintained over as long a time as the surgeon may desire to complete the operation.

The awakening is usually calm, nausea is rare, and post-operative shock is materially less than that following inhalation and spinal anesthesia.

This preliminary report is made to show that

major orthopedic operations have been done under pentothal sodium anesthesia with very gratifying results to the surgeon and patient alike. We are continuing the use of pentothal sodium and will make a final report when our series reaches five hundred cases.

## NOTE ON SUBCONVULSIVE METRAZOL THERAPY

Eugene Eisner, M.D.\*

Osawatomie, Kansas

There seems to be some general interest in the possibility that subconvulsive doses of metrazol, rather than the usual convulsive procedure, may prove effective in treating psychotic disorders. Since this method of administration has already been given a trial at the Osawatomie State Hospital, Osawatomie, Kansas, but to our knowledge no definite report has reached the literature, it was thought worthy of mention to comment briefly on our results.

Twenty patients consisting of fifteen schizophrenics and five manic-depressive were given subconvulsive intravenous metrazol therapy. Injections were given three times a week and dosages were increased .5 c.c. per week. In other respects, such as initial dosages and number of injections, this series corresponded to the protocols of a previous group of psychotic patients given convulsive doses as reported recently<sup>1</sup>—with one important departure: the injections were given slowly. It was found that this manner of injection induced enough stimulation in the patient to produce sufficient effects (minor convulsive phenomena, tremors, blepharospasms, confusion, respiration increase), yet, not enough stimulation to produce shock (major convulsion).

After sixteen such intravenous subconvulsive treatments were given to each of the twenty cases, it was felt that all patients had remained unimproved with one notable exception. This was the case of a fifty-five-year-old spinster whose manic-depressive status was colored with numerous conversion symptoms; the improvement in this case was held to be related to the increased interest given by her physician from whom she received injections, rather than to the fact that she was given injections of metrazol.

The conclusion appeared warranted, therefore, that the successful use of metrazol therapy in psychotic disorders was dependent upon the convulsant-producing properties of the drug. Any other use that metrazol may have in the treatment of psychoses would appear to be non-specific.

\*Staff Physician, Osawatomie State Hospital, Osawatomie, Kansas.  
(1) Eisner, E., and Orbison, W. D.: "An Objective Evaluation of Metrazol Therapy: A Rorschach Study." Read at the ninety-fifth meeting of the American Psychiatric Association, Chicago, Illinois, 1939.

## PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

We look forward to the month of November with a good deal of interest and some degree of satisfaction. Our committee work is progressing nicely. Most of the committees have already held meetings and have their programs moving forward. We want to compliment the committeemen for the interest they show and the readiness with which they undertake the various tasks.

November should hold some indications and some decision for us in connection with at least one of our problems. The happenings of this month may clarify or complicate this particular problem. I hope we will all meet these decisions with judgment and with a willingness to continue to work for a clarification and a right solution of this very knotty problem.

The problem of the care of the indigent still looms large and in many places has not yet been properly solved. The Committee on Medical Economics continues to wrestle with this problem and their relationship to the Kansas State Board of Social Welfare is such that we have confidence that this problem will be ultimately well handled.

Each week seems to bring its own and unusual problem but I have the feeling that our State Society was never in better condition than it is at present. There is such a wide interest on the part of the membership and such a determination to seek proper solutions that I view the situation with confidence and with a feeling that right solutions will ultimately be found for our major problems. During this month there will be held in Chicago a conference of the executive officers from the societies of the various states. Your Society will be represented and will learn of the experiences of other states and undoubtedly gain information that will enable us to more diligently and intelligently meet our own problems.

With words of congratulation to the membership for the interest it has shown and with assurance on the part of your officers that we will do our best to represent you, we beg to remain

Yours very truly,  
C. C. Nesselrode, M.D., President.



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## EDITORIAL

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### THE INTRINSIC PURPOSE OF X-RAY THERAPY

It is not unusual for the intelligent patient approaching x-ray therapy for the first time to inquire into the theory of this form of treatment. The patient wishes to know how and why benefit may follow the application of the x-ray, and why it is preferred to other methods of treatment in any particular case.

Likewise the physician under whose care the patient having malignant disease first comes, may not be directly interested in the technique of administering x-ray therapy, but be very much interested in the changes occurring in the tissues under treatment by which we hope to secure alleviation or cure.

To such, the radio-therapist may readily explain that however elaborate our method of attaining the desired result may be, the final objective is the destruction of the diseased or malignant cell without irreparable injury to the normal cells surrounding it.

The biological effect of radiation on a malignant cell is different from that upon a normal cell, the malignant cell being more sensitive to the effect of radiation, and therefore more easily destroyed than the normal cell.

In this connection it may be well to observe the changes that occur in a cell when it is exposed to an x-ray beam. The energy of the absorbed radiation is used in ejecting an electron from the absorbing atom. It is the action of this secondary electron which is probably accountable for all the chemical, physical and biologic effect of x-ray.<sup>1</sup> These effects are determined by careful and detailed studies of cells after irradiation and the changes are quite consistent. There is first edema of the nucleus. It enlarges with change in the chromatic material and final rupture of the nuclear membrane and thus destruction of the cell takes place.<sup>2</sup> The radiological effect has produced ionization within the nucleus.

Since the malignant cell is more susceptible to the effect of x-ray than the normal one, we endeavor to give such an amount of radiation as will cause

destruction of the diseased cell and still not do permanent damage to the normal cells in the vicinity. Upon this difference in radio-sensitivity of cells is based the entire purpose and hope of benefit from radiation therapy; upon this margin, wide though it be when radio-sensitive cells such as the embryological forms are concerned, and narrowing to a point at which it practically disappears when radio-resistant cells such as melano-sarcomas are involved, is placed the entire effort of the radiologist.

To the radio-therapist the preceding statements are most elementary, and the objective to be attained is a simple one, but the methods by which this objective may be reached, at once leads him into many and devious paths, and may tax his ingenuity and skill to the utmost.

He will take advantage of the physical properties of the x-ray and use them to attain his ends. Thus the space between the target of the tube and the surface of the patient will be increased as much as is practicable, that the difference in the amount of x-ray absorbed by the skin and that absorbed by the deeper tissues will be reduced.

Filters of copper, zinc or aluminum or combinations of them will be placed in the path of the x-ray beam to remove the longer and less penetrating wave lengths, permitting the passage of the shorter and more penetrating rays to reach the deeper structures.

The intensity of the ray administered must be sufficiently great for a positive and rapid action to be obtained.

The apparatus must be capable of generating a high voltage, that adequate penetration of the rays may be produced to secure their effect upon the deep parts of the body.

Very early in the use of x-ray for treatment, the use of multiple ports was thought of. By this cross fire method the amount of x-ray given the deep tissues may be greatly increased without increasing the amount given to any one skin area.

Again, the size of the ports through which the x-ray passes must be taken into consideration, since the larger the port with the larger amount of tissue exposed, the greater amount of secondary radiation will ensue, with a corresponding increase in effect on the tissues, both as concerns the deep portions, and the effect of backscatter on the skin.

Perhaps the last thing to receive notice in the technique of radiation therapy was the consideration of mitosis, or cell division. It has been found that a cell is most sensitive to the effects of radiation at or near its time of division.<sup>3</sup> Therefore a treatment so given that all the cells of a malignant growth receive a full dose at about the time of their dividing must certainly be more effective than treatment given in disregard of this time of cell division. This means persistent, repeated and full doses of radiation spaced closely together, that no diseased cells may escape the effect of the x-ray at the time they are most susceptible to its action.

And so, taking advantage of all these factors, the radiologist uses them in varying combinations to suit the case in hand. This cannot be a routine matter, since the method must always take into consideration such features as the character of the lesion, its location and the general condition of the patient.

In the end the radiologist reverts to his original purpose, that of getting a lethal dose of radiation to the diseased cells without doing permanent injury to the normal ones. Certainly anything less than this must be but palliative to the patient. Only in exceptional instances is the ability to reduce the size of a growth without killing it, of anything more than academic interest in relation to the patient and his prognosis.<sup>4</sup>

—O. R. Brittain, M.D., Salina.

#### BIBLIOGRAPHY

1. Landauer, Robert S., *Radiology*, May 1938.
2. Womack, Nathan A., *Bulletin, Kansas State Board of Health*, February 1939.
3. Womack, Nathan A., *Bulletin, Kansas State Board of Health*, February 1939.
4. Cathie, I. A. B., *Radiology*, April 1939.

### BLAMES THE MEDICAL PROFESSION

Ernest Albert Hooton, Curator of Somatology at Peabody Museum, vents his spleen in a tirade against the human race and the medical profession in an article in the *Atlantic Monthly* for October. The article is entitled "The Wages of Biological Sin." It is neither deserving of nor suitable for review in a scientific medical publication, but because it attacks the medical profession in an unwarranted manner, it requires editorial comment.

Of medicine, Doctor Hooton has to say, "Medi-

cine has alleviated suffering and prolonged life but it has, in so doing, also prolonged suffering and nullified the purging effect of natural selection. It has saved . . . debilitated organisms which are adding to the burden of society by reproducing more and worse offspring." He censures the medical profession for their "dogma of the sanctity of human life." He blames the profession for not advocating methods of birth control, although he offers no sure method of preventing pregnancy. He would allow the physically unfit to die. With the superior attitude of a Nazi war lord, he appears to be interested only in a highly physical type of man for the glory of a conqueror. He betrays ignorance of methods of medical research which he attempts to criticise and he is indeed unfair to the intelligence and zeal of thousands of practicing physicians, teachers and research workers who through their studies and writings furnish the leadership in the profession of medicine.

Declaring heredity to be the most vital factor in human evolution the author bears down with particular emphasis upon this quite self-evident fact, but his mind is closed to the environmental factors which have and are still having the greatest influence upon human beings. He blames the medical profession for devoting its attention to the "unfit" and thereby directing the course of evolution downward! In a concluding paragraph the author advocates the setting up of institutes for the study of human heredity. In this undertaking he would enlist the services of geneticists, phychologists, sociologist, and even anthropologists. Amazement may well be expressed at his recommendation that the social sciences should be included in such a project. The social scientists already know that underlying maladjustment and disease are certain social and economic ills which greatly inhibit the cultural development of the human race.

Doctor Hooton's attack upon the medical profession and upon all humanitarian efforts is reminiscent of Spengler and unworthy of a man pretending to be a scientist.

The article is like Lincoln's pardoner's letter: it was good for him to write it but he should not have put it in the mail.

—R. B. S.



## EYE, EAR, NOSE & THROAT

### BRAIN TUMOR: PRESENTING MENTAL SYMPTOMS AND CHOKED DISC

Herschel S. Smith, M.D.\*

Osawatomie, Kansas

Mental symptoms and eye findings occasionally are the only symptoms that can be found in brain tumors. Mental involvement may be associated with tumors in any portion of the brain, however, when the tumor occurs in the silent areas, personality changes are frequently the first symptoms. Cole<sup>1</sup> states that this is particularly true of frontal lobe tumors. Kennedy<sup>2</sup> states that lesions of the temporal lobes are also frequently associated with mental changes.

Only occasionally are brain tumors not associated with choked disc. Decrease in vision is frequently not noticed until the choked disc is quite marked. Perimetric studies may show irregular contraction of the visual fields for form and color, central scotomata, or enlargement of the blind spot.

#### CASE REPORT

History: The patient, a white female, aged forty-three years, apparently blind, was admitted February 16, 1939, to the Osawatomie State Hospital from jail where she and her husband were facing trial for murder supposedly committed about four months before patient's admission to the hospital. No history of the case was available. The patient did not give any reliable information as to her past or present physical condition, other than that she became blind over night about two months prior to her admission to the hospital.

Physical Examination: General physical, neurological, and laboratory examination (including complete blood and spinal fluid) were all essentially negative. The eye examination, however, showed the patient to be totally blind in both eyes. Pupils were dilated to about 6 m.m., and did not react to light. There was an external strabismus of about twenty degrees, of a type usually seen in the totally blind. There was no ocular muscle paralysis. The fundus, which could clearly be seen, gave a typical picture of increased intra-ocular pressure. The arteries and arterioles were practically obliterated, completely so in the left eye and almost so in the right. The veins appeared uniform, and darker than usual,

surrounded in some areas by fairly recent hemorrhages. There was a choking of each disc of about four diopters.

Mental Examination: The patient spoke slowly, deliberately, and repeated contradictory stories. There was hesitation of speech and some blocking. Recent memory, knowledge of current events, and past memory were poor. Judgment and insight were very deficient.

Course: The patient was transferred to another hospital on February 24, 1939, where a tumor was localized in the right frontal lobe. On March 10, 1939, the right anterior frontal lobe was amputated back to the pre-motor area. The pathological diagnosis was spongioblastoma showing secondary hemorrhages embedded in the wall of a cyst (neoplastic cyst of the brain). The patient died three weeks following operation.

#### SUMMARY

A case of frontal lobe tumor has been presented in which mental changes and blindness due to choked disc were the only symptoms found.

1. Cole, W. H.: *Textbook of General Surgery*, New York, D. Appleton-Century Company, 1936, p. 545.
2. Kennedy, Foster: *The Symptomatology of Temporo-sphenoidal Tumors*. *Arch. Int. Med.*, 8:317. 1911.

### EYE EXAMINATION IN THE DIAGNOSIS OF NERVOUS AND MENTAL DISEASE

Herschel S. Smith, M.D.\*

Osawatomie, Kansas

Very frequently the eye examination provides a very valuable aid in establishing a diagnosis and subsequent treatment in nervous and mental diseases. Organic diseases of the central nervous system usually produce some disturbances in the delicate ocular mechanism. These disturbances are so characteristic in certain diseases that the eye findings are almost a prerequisite to making a diagnosis.

#### CASE REPORT

History: A fifty-two-year-old colored female was admitted to the Osawatomie State Hospital because of mental disturbances characterized by irrational speech, indecent dress, refusal to eat and combative behavior. There was no history of any previous mental disease, or of receiving any type of antilutetic therapy.

Examination Data: Physical examination showed an emaciated negress who appeared much older than her given age. Radial vessels were hard and cord-

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like. There was a diastolic murmur heard over the aortic and pulmonary areas. Blood pressure was 130/85.

Neurological examination showed absent patellar reflexes and positive Babinski, Gordon and Oppenheim reflexes.

Eye examination showed reduction of vision. A marked arcus senilis was present. The iris border was firmly bound down by adhesions to the anterior lens surface. The retinal blood vessels were markedly sclerotic. There were a few recent hemorrhages and a few old scars in the periphery of the fundus.

Laboratory Examination: Blood Wassermann and Kahn were positive. Spinal fluid Wassermann and colloidal gold curve were negative.

Mental Examination: The patient was disinterested, shallow in thought, combative, irrational and disoriented.

#### COMMENT

From the mental examination and superficial examination a tentative diagnosis of Syphilitic Meningo-Encephalitis was made. The treatment, therefore, would have involved a course of rather strenuous fever therapy (which may have proven fatal in this particular case) combined with a costly and prolonged course of chemotherapy. However, with the findings of a negative spinal fluid, and normal pupillary reflexes, a different diagnosis was sought.

The patient undoubtedly had vascular syphilis as indicated by the old iritis, old retinitis and positive blood Wassermann. The premature senility, the cord-like radial arteries, the arcus senilis and marked retinal arteriosclerosis with recent hemorrhages and exudates point more to a diagnosis of arteriosclerosis, and the syphilis being only an etiological factor in the production of the pathological blood vessels. A diagnosis of Psychosis with Arteriosclerosis was subsequently made and appropriate treatment instituted.

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## TUBERCULOSIS CONTROL

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### PHRENIC NERVE INTERRUPTION\*

J. W. Cutler, M.D.

Claims concerning the value of phrenic nerve interruption are contradictory and confusing. One author reviewed seventy-eight reports involving a total of 7,435 operations performed as an independent procedure and found "cures" reported in twenty-three per cent. On the other hand, Coryllos, citing

\*Phrenic Nerve Interruption, J. W. Cutler, M.D., *Amer. Review of Tuber.*, July, 1939. Reprinted from *Tuberculosis Abstracts* for November, 1939.

his own experiences and those of several workers abroad concluded that the operation is "not efficient, not without danger, and causes a loss of precious time."

This wide divergence of opinion is in good part explained by the type of patient treated—phenomenally good results are in relatively early cases and they would undoubtedly have been obtained from bed-rest alone, while in far advanced cases and in the presence of large, thick-walled cavities success can rarely be expected.

In a consecutive series of 122 tuberculous patients on whom phrenic nerve interruption was performed, it was done on 106 as an independent collapse measure. Many stages and varieties of tuberculosis are represented. Sexes are about equally distributed. The operation was done sixty times on the left side and sixty-two on the right. In sixty-five the interruption was temporary, in fifty-seven permanent.

Evaluation of the operation should be based primarily on the changes that follow in the lung under consideration, as determined primarily by comparative x-ray findings, and not necessarily upon the ultimate fate of the patient. The time element, following operation, is of extreme importance. The good results of phrenic nerve interruption become evident within the first six months. Late results are more difficult to define; therefore, a three-to-five-year post operative interval, as a basis for late results, is not unreasonable.

The evaluation of phrenic nerve interruption is discussed under four main headings: (1) the value of the operation as an independent collapse measure, (2) the value as an adjunct to other collapse measures, (3) complications of the operation, and (4) temporary as contrasted with permanent phrenic nerve interruption, and their corresponding indications and contraindications.

In retrospect, the cases are classified as "apparently suitable" and "unsuitable." Unsuitable cases include: (1) apical cavities three or more cm. in diameter, for the operation is useless in the attempt to close apical cavities in which the apex has become more or less excavated and adherent to the thoracic wall; (2) dense fibrotic lesions with embedded cavities; (3) pneumonic consolidations; (4) acute infiltrations. In this series there were thirty patients with lesions deemed in retrospect as unsuitable for the operation. The contraindications, in the sense that no benefit will follow, cannot however be considered absolute for occasionally a distinctly good result will follow.

Seventy-one patients fell into the "apparently suitable" category and were evaluated as follows:

(a) Unimproved, fifty-two per cent. No material x-ray evidence of improvement in the tuberculous



lesions noted within three to six months after the operation, or an actual increase in the disease. Lack of improvement was observed in all kinds of cases with "apparently suitable" lesions, including both cases of early limited infiltrations without x-ray evidence of cavity and cases of advanced disease.

(b) Improved, thirty-four per cent. Cavity was either closed or reduced in size or there was x-ray evidence of significant clearing with lessening of toxemia and improvement in well-being. However, in only fourteen of the twenty-four cases in this group, did the improvement result in the stabilization of the lesion so that no further therapy was required. In the remaining ten, improvement, marked at first, was in time followed by serious relapse.

(c) Cleared, fourteen per cent. Clearing of the disease in the lung except for some fibrous strands and a few small, sharply defined, moderately dense, spots. There were cavities of varying sizes in eight and infiltration without x-ray evidence of cavity in two. The result followed so shortly after operation and in such manner as to leave little doubt that the paralysis of the diaphragm was the responsible factor. The lungs have remained clear over an average period of more than six years after operation.

No concrete conclusions could be reached as to the type of case among the "apparently suitable" patients in which the operation can be undertaken with reasonable assurance of success. Good results were obtained in advanced disease and in unexpected situations. On the other hand, failures were encountered in minimal cases. In general, good results were observed more frequently when the major lesion was situated below the clavicle, and when the cavity was isolated, thin-walled and surrounded by nearly normal lung tissue.

The relative value of phrenic nerve interruption as an alternative to artificial pneumothorax and thoracoplasty, is considered. In the majority of cases in which phrenic nerve interruption was used as an alternative to pneumothorax the operation was either a useless undertaking or relapse followed an initial improvement. In those cases in which bilateral pneumothorax ultimately became necessary, selective collapse could be established in only twelve out of twenty-eight patients. Time wasted on phrenic nerve interruption was largely responsible for the formation of extensive adhesions. Phrenic nerve surgery should not be looked upon as a substitute for pneumothorax, but must be regarded as a supplementary form of therapy.

More serious is the question of phrenic nerve interruption in preference to thoracoplasty. Of thirty-one patients in this series suitable for an immediate thoracoplasty, but subjected to phrenic nerve inter-

ruption in the hope of avoiding thoracoplasty, three died from hemoptysis and three from progressive tuberculosis and seven more became hopeless invalids. In retrospect, these tragedies might have been avoided had thoracoplasty been performed promptly when conditions were most favorable. The important thing is not to resort to a phrenic nerve operation when thoracoplasty is plainly indicated, and not to delay thoracoplasty beyond the time when the phrenic nerve operation has accomplished its maximum good.

Phrenic nerve interruption was carried out also in sixteen patients either as an adjunct to other collapse measures or in the treatment of certain complications of pneumothorax therapy including: ineffective pneumothorax, hemoptysis, troublesome cough, discontinued pneumothorax therapy, spontaneous pneumothorax, empyema cavities. The operation accomplished the desired result in about one-third of these patients.

Complications of phrenic nerve interruption must be taken into consideration. In the present series, significant complications attributable to the operation, were encountered in six with death in two. Cardiac failure, which accounted for the two deaths, was the outstanding complication. Other important complications were interference with the cough mechanism (two patients), gastric disturbance (belching and a sense of fullness in the stomach) annoying but not serious (three patients). The fact remains, however, that the treatment of tuberculosis does not always permit a safe and sure choice of therapy. Phrenic nerve interruption may, in individual cases, prove to be accompanied by the least risk.

Both temporary and permanent phrenic nerve interruption have their place. A temporary phrenic nerve interruption is indicated (1) when the problem is of an emergency nature, as in hemorrhage or active disease requiring immediate collapse therapy when other collapse measures cannot be instituted at the moment, and (2) when other collapse measures such as pneumothorax or thoracoplasty, are in prospect. A permanent phrenic nerve operation is indicated when the operation is carried out as the sole therapeutic measure in the attempt to cure the patient after other collapse procedures have been considered unsuitable, or are plainly contraindicated.

The danger today is not that too many phrenic nerve operations will be performed or that they will be undertaken in an indiscriminate manner, but that the operation will be discarded. This would be unfortunate, for phrenic nerve interruption appears to have value in fifteen to twenty-five per cent of patients. At times it may be the simplest means for saving a patient's life. The operation, however, should be restricted to properly selected cases.

## NEWS NOTES

### OSTEOPATHS

Two briefs in the case of *Gafney and Wallace vs. the Wilson County Hospital* were recently filed in the Kansas Supreme Court. One of the briefs was prepared by Mr. W. H. Edmundson, of Fredonia, attorney for the Wilson County Hospital, on behalf of that institution and the other was prepared by Mr. C. A. Bauer, Jr., county attorney of Wilson County on behalf of the citizens of that county. Both of the briefs pertain to the motion to quash which is now pending in that case.

Excerpts from Mr. Edmundson's brief are as follows:

Paragraphs VII to XII inclusive, set out in considerable detail the facts upon which plaintiffs base their prayer for relief, and paragraphs XIII to XVI inclusive, seem to be leveled at the Supreme Court of the state of Kansas, although it is not a party defendant, and are very critical of that honorable body because of its opinion in the case of *State, ex rel., vs. Gleason*, 148 Kansas, Page 1. The last division of said Petition has the appearance of an attempt on the part of plaintiffs by means of a skeleton key or a jimmy to enter, through the back door, into the *Gleason* case, and to subject the issues submitted and the law as interpreted by the court in that case to a re-examination.

Petition, in the VII paragraph, complains that the County Hospital authorities, their servants and employees are "failing and refusing to perform the duties imposed upon them by law, are discriminating against the plaintiffs and the patients of plaintiffs, and are refusing plaintiffs the privilege of personally treating their patients in the Hospital; and particularly are refusing in the manner and under the conditions hereinafter immediately set out." Continuing are four subdivisions of that section. In the first they recite, they have had, how have, and will continue to have, patients requiring major operations with surgical instruments. The second subdivision recites that plaintiffs have had, now have, and will continue to have, patients requiring minor operations with surgical instruments. Under the third division they allege that defendants deny to the plaintiffs the right to practice medicine and surgery in obstetric cases, and in the fourth subdivision plaintiffs frankly state they are denied by defendants the right to use any of the sixteen classes of drugs used in the practice of drug therapy.

If there is any virtue in the law as laid down in the *Gleason* case, that case answers in the negative, the right of plaintiffs to the relief demanded. As no allegation in plaintiff's Petition charges the Hospital Board with having denied them the right to practice osteopathy in that hospital when the practice was within the bounds prescribed by the court. Defendants submit that Plaintiffs' Motion should be overruled and Defendants' Motion to Quash should be sustained.

The present action is brought by two individuals to compel a Board of Trustees having charge of a public hospital maintained by taxes levied against all the taxable property in Wilson County, to permit them to use the facilities offered by that hospital in their private business. The question immediately arises,

is the nature of the duties intrusted to and performed by the Board of Trustees of the Wilson County Hospital of such a public nature that a private citizen can maintain the action of mandamus against that hospital and its Board of Trustees as defendants?

The powers and duties of the Board of Hospital Trustees are considered in four sections of Chapter 19, Article 18, G. S., 1935.

Section 1804 requires:

"The Board of Hospital Trustees shall make and adopt such laws, rules and regulations for their guidance and for the government of the Hospital as may be deemed expedient . . . and shall in general carry out the spirit and intent of this act . . . with equal rights to all and special privileges to none."

Section 1810, further provides,

"Such Hospital always being subject to such reasonable rules and regulations as said Board may adopt in order to render the use of said Hospital of the greatest benefit to the greatest number; and said Board may exclude from the use of such Hospital any and all inhabitants and persons who shall wilfully violate such rules and regulations."

Section 1811, reads in part as follows:

"Physicians, nurses, attendants, the persons sick therein and all persons approaching or coming within the limits of the same and all furniture and other articles used or brought there shall be subject to such rules and regulations as said Board may prescribe."

Section 1813 provides:

"No discrimination shall be made by the management of such hospital against practitioners of any school of healing recognized by the laws of Kansas and all such legal practitioners have equal privileges in treating patients in said Hospital."

The rules and regulations made by the board of trustees for the government of legal practitioners, practicing within the hospital, must be fair and reasonable, such as the board deems necessary for the orderly operation of the institution. They must not be discriminatory against any pseudo-medical sect, but if any such sect is unable to comply with reasonable regulations promulgated by the board of trustees, that would seem to be due to the unfitness of that sect, in the judgment of the board of trustees, to treat patients in the institution and not unlawful.

The Board of Trustees of the Wilson County Hospital, after studying the opinion and post-decision opinion in *State ex rel. vs. Gleason*, accepted the law as set out in those opinions. The Hospital, being a county institution, is not operated for the benefit of practitioners of any school of the art of healing, but for the benefit of the public. Each patient has the right to select his own physician, but such physician does not have the right to use the hospital's facilities except as authorized by law. To permit any person or persons to use the facilities of the Hospital, who were not registered physicians and surgeons under the laws of the state of Kansas, no matter the proficiency of the individual or the school of the art of healing to which they might adhere, would be making the Hospital Board a party to unlawful acts and practices as defined by the *Gleason* case, and inviting criticism if not more serious trouble. What



would be the liability of the Hospital Board for damages, should the subject of a surgical operation, performed by an osteopath in that hospital, suffer injuries deemed by him to have been negligently inflicted? Or should a patient treated by drug therapy with unfavorable results, for any reason seek to hold the Hospital liable, what defense could be offered if the plain intendment of the law as stated in the opinion in the Gleason case be ignored? The Hospital Board should not be subjected to such liability.

The Board is presumed to know the law and to follow, to the best of its ability, the ruling of this court on legislative acts affecting county hospitals.

The fact is not in evidence, on a Motion to Quash the Petition, except by inference from the allegations in plaintiffs' Petition, but from that inference this Court would be justified in assuming that the Board of Trustees of the Wilson County Hospital has permitted all osteopaths, including these plaintiffs, to practice osteopathy in the hospital, but has promulgated a rule refusing the facilities of the hospital to the plaintiffs and other osteopaths, for use in performing surgical operations and practicing medicine and surgery, until such times as the plaintiffs and other osteopaths, are licensed by the Board of Medical Registration and Examination. Under statutory authority as interpreted in the Gleason case the Board has full power and authority to promulgate and enforce rules which exclude plaintiffs from practicing medicine and surgery in the Wilson County Hospital.

Defendants submit Plaintiff's petition shows no duty has been neglected and no law ignored in regard to the use of the Wilson County Hospital facilities by Osteopaths, and the Motion to Quash should be sustained.

Excerpts from Dr. Bauer's brief are as follows:

No county officers per se are named as defendants in the action. Yet the county attorney feels that the general public of Wilson County has such an interest in the operation of this county owned and operated hospital that he has deemed it in the board public interest to appear in this case as *amicus curiae* and on behalf of the citizens of Wilson County. Leave for such appearance has been sought and obtained.

It is the intention of the Wilson County Attorney to urge that the legislative acts which deal with the practice of the several professions should be enforced. It is in that spirit that this brief is filed with the hope that the authorities and the arguments herein advanced may, in some small measure, be of assistance to the court. It appears to *amicus curiae* that the motion to quash filed by the defendants herein should be sustained on several grounds. The reasons for that conclusion will be discussed separately herein.

The specific things of which the plaintiffs complain in the paragraphs following the quoted part are:

1. That the plaintiffs desire to use the Wilson County Hospital for the purpose of performing abdominal surgical operations with the use of surgical instruments, and the defendants have denied the plaintiffs that privilege.
2. That the plaintiffs desire to use the facilities of The Wilson County Hospital to perform other surgical operations with surgical instruments and are denied that privilege by the defendants.

3. That the plaintiffs desire to use medical and operative surgical therapy in connection with the practice of obstetrics and the defendants deny them that privilege.

4. The plaintiffs desire to use a list of agencies which cover the entire practice of medicine and the defendants refuse them the privilege of practicing to that extent in the hospital.

The first striking thing on analyzing this paragraph VII is that this paragraph, and the petition as a whole, contain no affirmative allegation or even suggestion that the defendants have in any instance denied the plaintiffs the privilege of practicing osteopathy in the hospital. This paragraph, as well as the petition in its entirety, leads to but one conclusion; that is, the plaintiffs complain because the defendants refuse to permit them to practice medicine and surgery in the hospital; they do not claim they have been refused the privilege of using the hospital for the practice of osteopathy. It is also significant that no place in the petition is there found any allegation that the defendants are acting wrongfully, fraudulently or corruptly.

A fair reading of the petition herein discloses that the defendants, in the exercise of their power and control of the hospital, have passed a rule that osteopaths may practice osteopathy therein but that they may not perform surgical operations by means of surgical instruments and may not practice medicine therein. It would seem that the naked statutes alone of this state would be sufficient authority to uphold the validity of such regulations. It is not necessary, however, to rely solely upon the clear and unambiguous language of our statutes.

The Supreme Court of the United States had before it a case in which a resident of Texas, an osteopathic physician brought suit in the District Court of Southern Texas against the city of Galveston and members of the governing board of the city hospital to enjoin the enforcement of any rule or regulation excluding the appellant and other osteopaths from practicing their profession in the hospital and denying admission to patients who wished to be treated by the appellant and other osteopathic physicians. The plaintiff in that case argued that a constitutional provision required that if some physician were admitted to practice in the hospital, all must be permitted or there was a denial of equal protection of the law. The United States Supreme Court in that case held that such rule and regulation was within the power of the governing board of the hospital and was not a denial of equal protection of the law to the plaintiffs. That case is *Hayman vs. City of Galveston*, 273 U. S. 414, 71 L. Ed. 714.

In a like case the Supreme Court of the state of Colorado in construing a Colorado statute similar to the Kansas statute found the opinion of the Supreme Court in the Galveston case to be of controlling authority, . . .

"A physician has no constitutional or statutory right to practice his profession in a county hospital. The county board has complete supervision and control of county hospitals in this state. A regulation excluding from the county hospital, or the right to practice therein, the devotees of some of the numerous systems or methods of treating diseases authorized to practice profession in Colorado is neither unreasonable nor arbitrary. Some

choice of methods necessarily exists, and we cannot say that in the case at bar the county board of commissioners did not have an adequate basis for its resolution. Neither can we say that this resolution was not justified upon the ground, which abundantly appears from this record, that, if the right to practice in the county hospitals is open to all the different schools of medicine, there would be constant jealousies and dissatisfaction between the rival schools of medicine which probably might or would greatly lessen the usefulness of the public hospital. The court cannot substitute its judgment for that of the board. Not being contrary to any provision of the federal or state Constitution or of the laws of the state, its determination cannot be set aside by us. The judgment is therefore affirmed." *Newton vs. Board of Commissioners* (Colorado 1929) 282 Pac. 1068.

It will be noted that these cases above discussed hold that the board of hospital trustees may exclude osteopaths from county hospitals for all purposes. The rule of which these plaintiffs complain is less stringent because they may use the hospital facilities for osteopathic purposes and they have not been denied the privilege of using the facilities for any purpose except the practice of medicine and surgery.

The plaintiffs urge that the provisions of G. S. 19-1813 above set out preclude these defendants from establishing and enforcing such rule. They based their argument upon the phrases "\*\*\*\* no discrimination shall be made against practitioners of any school of medicine or healing recognized by the laws of Kansas, and all such legal practitioners shall have equal privileges in treating patients in said hospital."

The plaintiffs construe this statutory phrase to mean that if one licensed practitioner of healing in Kansas can perform a certain act in the hospital then any other licensed practitioner shall have the same privilege. In other words if a licensed doctor of medicine can perform a surgical operation by means of surgical instruments in the hospital, then a chiropractor could perform the same type of operation in the same manner; or if an osteopath is privileged to perform osteopathic therapy therein, then a podiatrist could also perform the same type of therapy. It seems obvious that the parentage of such construction is a vain hope and not sound logic.

The proper construction to be given to this phrase is that the legislature recognizes a broad field of healing which may be divided into physicians and surgeons who are practitioners of the "school of medicine" on the one hand and "practitioners of healing," such as osteopaths, chiropractors, dentists, optometrists and others granted a restricted license by the state on the other hand.

Thus this statute states: "There shall be no discrimination against 'practitioners of any school of medicine.' The legislature has recognized (G. S. 65-1001) that there are several schools of medicine and has provided that doctors of medicine shall be examined in the theory and practice of medicine by those members of the board who are of the same school of practice as the applicant claims to follow. The legislature has also provided (G. S. 74-1001) that the State Medical Board should represent the 'different schools of practice' as nearly as possible in proportion to their numerical strength in the state.

To find legislative recognition of the separate "schools of medicine" in this state reference can be made to Chapter 122, Laws of 1879 which was one of the early licensing acts for physicians and surgeons. That act recognized that practitioners of medicine were divided between "regular" or "allopathic schools," the "eclectic school" and "homeopathic schools." Thus that part of the statute which precludes discrimination between the "practitioners of any school of medicine" merely means that the hospital board should not be arbitrary or capricious in making rules and regulations governing their practice of medicine and surgery under their license.

The legislature was fully aware that, besides the three schools of medicine which were licensed by one board, there had been created other licensed healers. Such recognition had been given by legislative authority and included such healers as the osteopaths, the chiropractors, the dentists, the optometrists and the podiatrists. This second provision of the statute merely directed the trustees of the hospital to permit all osteopaths to practice osteopathy therein and all chiropractors to practice their form of manipulative surgery therein, as well as the other professions holding restricted licenses to practice. To place any other construction upon this paragraph would be to nullify all those provisions of the statutes which designate the type of practice to be carried on by the licensed healers. The mere statement of this result discloses the fallacy upon which the plaintiffs base their construction.

The statutes of this state and the opinions of this court have so clearly set out the restricted nature of the osteopaths licenses that it seems it should no longer be open to question as to what could be carried on under that license. The plaintiffs recognize that fact and try to escape the consequences by challenging the soundness of the opinion of this court in the case of *State ex rel., vs. Gleason*, 148 Kan. 1, 458, 459, 79 P2d. 911.

On three occasions this court found it necessary to determine the nature of osteopathy under the laws of this state. In each such instance the court found that:

'Osteopathy is defined as a 'system based on the theory that disease are chiefly due to deranged mechanism of the bones, nerves, blood vessels, and other tissues, and can be remedied by manipulations of these parts.' (Webster's New Inter. Dict.) It has been judicially those along the spine—with a view to inducing human body without the use of drugs, by means of manipulations applied to various nerve centers — chiefly those along the spine—with a view to inducing free circulation of the blood and lymph, and an equal distribution of the nerve forces. Special attention is given to the readjustment of any bones, muscles, or ligaments not in the normal position."

*State vs. Johnson* (1911)

84 Kan. 411, 1. c. 417

114 Pac. 390.

"We must look to the law books for the definition of the term. 3 Words and Phrases, 2d series, 803, defines osteopathy as 'a method of treating diseases of the human body without the use of drugs, by means of manipulation applied to various nerve centers, chiefly those along the spine, with a view to inducing free circulation of the blood and lymph, and an equal distribution



of the nerve forces. Special attention is given to the readjustment of any bones, muscles or ligaments not in the normal position. It is that method of the healing art accomplished by a system of rubbing or kneading the body."

State vs. Eustace (1925)  
117 Kan. 746, l. c. 747  
233 Pac. 109.

The last such occasion was the case of State ex rel., vs. B. L. Gleason, 148 Kan. 1, 458, 459 where the Supreme Court adhered to the prior interpretation as above set out. In view of the fact that this case was decided in June, 1938 and was so recently before the court extensive quotations from that case are unnecessary.

authorizing, effect. The practice authorized must be 'chiropractic,' and it must also be 'as taught in chiropractic schools or colleges. Neither of these expressions can rule the meaning of the statute, to the exclusion of the other.

"(10, 11) The effect of the words 'as taught in chiropractic schools or colleges' is not to set at large the signification of 'Chiropractic,' leaving the schools and colleges to fix upon it any meaning they choose. Were the word 'chiropractic' of unknown, ambiguous or doubtful meaning, this clause, 'as taught' etc., might serve to provide a means of defining or fixing its signification, but there is here no such lack of clarity. The scope of chiropractic being well known, the schools and

## PHYSICIAN'S ASSISTANTS ASSISTED TO RENDER EFFICIENT ASSISTANCE TO INSISTENT PHYSICIANS

### DARING DRAMA DIVULGING DOS AND DON'TS TO DOCTOR'S DIENERS

Wichita, May 13, 1940—S. C. M. S.

The above date marks the opening of the eighty-first annual meeting of the KMS. The doctors throughout the state will be asked to give their office receptionists, technicians, nurses and/or bookkeepers the day off, for THAT day will be THEIR day in Wichita. A program is being planned for them which you, their boss, cannot afford to have them miss. It will include a dramatization of office technic in relation to the patient, the making of the appointment, the reception of the patient, preparation for examination, etc. Telephone technic will be presented and discussed, as will insurance reports, bookkeeping, credits and collections, and how to conserve the doctor's time. There will be opportunity for exchange of ideas and getting acquainted which, Doctor, is really why YOU come to the meeting.

### KANSAS PHYSICIANS TO SHOOT AND GOLF WHILE THEIR OFFICE ASSISTANTS STUDY

Same Date—Same Place—If you shoot or play golf you will be spending this first day of the meeting amid fun, relaxation and tall stories. Your reward will be prizes and good fellowship. Your Committee has been working to make this day more enjoyable than ever. Regardless as to whether you shoot or play golf, plan to send or bring your office assistant to Wichita that first day. It will pay you dividends for the rest of the year. You may win no prizes at golf or shooting but you will have a good time. All the while your office assistant will be down at the Forum pegging away, learning how she can make your office routine smoother, thereby saving you sufficient time that you may go out more often to improve your golf game or shooting eye. WE MEAN IT.

SEND HER TO WICHITA, MONDAY, MAY  
13—ONE DAY ONLY—YOU WILL BE WELL  
REPAID.

It is interesting to note that at the time the Gleason case was before the Supreme Court, the Supreme Court of the state of California had before it a similar case dealing with a statute in that state which authorized a licensed chiropractor to practice chiropractics "as taught in the chiropractic schools or colleges."

"Taking up the first part of this authorization, appellant contends that it authorizes the practice by a licensed chiropractor of 'anything that he is taught in chiropractic schools and colleges,' citing Evans vs. McGranaghan, 1935, 4 Cal. App. 2d 202, 41 P. 2d 937. This is too broad an interpretation of the provision. It contains two expressions, each of which has a limiting, as well as an

colleges, so far as the authorization of the chiropractor's license is concerned, must stay within its boundaries; they cannot exceed or enlarge them. The matter left to them is merely the ascertainment and selection of such among the possible modes of doing what is comprehended within that term as may seem to them best and most desirable, and so the fixing of the standards of action in that respect to be followed by chiropractic licensees."

People vs. Fowler  
(Cal. Oct. 20, 1938)  
84 P. 2d 326, l. c. 331.

This case in California should be of interest to this court because of the close analogy between the reason-

ing of that court and the reasoning of this court in the case of *State ex rel., vs. Gleason Supra*, although each case was decided without citing the other and involved similar points of law.

In view of the opinions of this court as above set out it would seem that the board of trustees for Wilson County Hospital exercised a sound discretion in enacting the rule of which these plaintiffs complain; that is, that osteopaths may use the hospital facilities to practice osteopathy but they may not use its facilities any more than a chiropractor or other healer, for the practice of medicine and surgery.

As to what consideration other than the statements of law the board took into consideration there is no allegation. It may be that the board was of the opinion that if it permitted unlawful practice in the hospital then lawful practitioners would not permit patients to enter the hospital and thus the use of the hospital for the greatest good would not occur. The writer, however, is well acquainted with the individuals who compose the board of trustees of the Wilson County Hospital. In all his relations with them he has found their acts to be controlled solely by the law and for the best benefit of the public in Wilson County. He knows that the failure of the plaintiffs to charge them with fraud, corruption or oppression in this action is in accordance with their method of conducting the affairs of the hospital. He knows also that this board, in exercising its discretion in formulating the rule of which this plaintiff complains, took into consideration all those things which would go to make an efficient organization and to make for the efficient operation of The Wilson County Hospital. He feels that their judgment should not be set aside because the plaintiffs are dissatisfied with the result which flows from the operation of the exercise of such discretion.

It would indeed be a difficult situation should the plaintiffs prevail in this action and secure a permit from this court to practice medicine and surgery generally, when at the same time such acts carried on by other licensed osteopaths in this state, would subject them both to civil and criminal prosecution and such act, if carried on by the defendant Gleason, would subject him to a citation for contempt of the order of this court.

To escape this conclusion the plaintiffs in this action challenge the soundness of the opinion of this court in the Gleason Case. From an examination of the record in that case it would appear that the defendant, Mr. Gleason for himself and all osteopaths of the state, asked the court to determine questions of law (*State vs. Gleason*, 148 Kan. 459) and it would appear that the court at that time had before it every argument the plaintiffs advance herein and specifically found against the plaintiffs contentions. No further argument is advanced at this time in this collateral attack that should tend to weaken the effect of the decisions of this court in that case. In that case the court found, as a matter of law, that osteopaths were not licensed to practice medicine and surgery and had never been so licensed in this state.

In 1911, in 1925 and again in 1938 this court found that the statutes of this state forbid osteopaths to practice medicine and surgery. Many sessions of the legislature of the state have convened and adjourned following these judicial constructions of the statutes. It is highly significant that no session of the legisla-

ture from 1911 to the present time has found that those judicial interpretations are incorrect.

As citizens of the state of Kansas they are bound by all the laws which apply to them; as holders of a privilege conferred by the state of Kansas they are doubly bound not to abuse that privilege by usurping powers and privileges not conferred. To prevail in this case would enable these plaintiffs to obtain licenses to practice medicine and surgery in the County Hospital of Wilson County without having met the requirements of the laws of this state to obtain that privilege. Certainly the result would be that the plaintiffs would be permitted to perform an unlawful act and the defendants and the county attorney of Wilson County would be required to sit idly by while the laws were violated with impunity.

In view of the above cited and the arguments advanced, it is the opinion of the county attorney of Wilson County that the motion to quash filed by the defendants in this action should be sustained.

There is no allegation that the defendants have been or are threatening to act arbitrarily, capriciously or oppressively. The failure of the plaintiffs to set out that the defendants have so acted or intended to so act is strong evidence that this statement is true in fact as well as in law.

The governing body of The Wilson County Hospital is well and ably discharging the duties placed upon it by statutes. It is following the law in all particulars and the public of Wilson County is receiving the benefit of that able management. To substitute the judgment of the plaintiffs, the court or some other office for that of the board would result in a chaotic condition in the operation of the hospital which will benefit no one but will grievously injure all.

Until such times as the plaintiffs can come in with an allegation of fraud, corruption or oppression in the management of The Wilson County Hospital the board of trustees should not be molested. If evidence of fraud, corruption or oppression is found it will then not be necessary for the plaintiffs in their private capacity to resort to the court. Some public officer can be found who will secure the termination of the fraudulent and oppressive conduct.

The osteopath's brief will be filed on or before November 9th which is the date set by the Kansas Supreme Court for the hearing on the motion to quash. If the motion to quash is upheld the case will be lost in so far as the osteopaths are concerned. If the motion to quash is overruled the hospital will probably be instructed to file an answer as to the facts in the case.

The United States Circuit Court of Appeals recently announced that the case of *Kansas State Osteopathic Association vs. William H. Burke*, Collector of Internal Revenue, will be heard by that court in Wichita on January 2. Both the government and the osteopaths will file briefs prior to that date.

No hearings have as yet been held on the demurrers filed by the osteopaths in the injunction cases now pending in various District Courts in the state. It is believed that most of these demurrers will be heard within the near future.

## TECHNICIANS COURSE

A lecture course for technicians, employed by physicians and hospitals, will be held at the Jayhawk Hotel, in Topeka,



on December 11, 12 and 13. The subjects to be covered in the course will pertain to routine laboratory procedures in the fields of: hematology, serology, bacteriology, parasitology, blood chemistry, basal metabolism, and the technical preparation of electro-cardiograms.

Instructors in the course will be: Dr. C. A. Helwig, of Wichita; Dr. N. P. Sherwood, of Lawrence; Dr. C. G. Leitch, of Kansas City, Missouri; Dr. J. L. Lattimore, of Topeka; Mr. H. C. Ebrndorf, Mr. Allen Gould, and Mr. F. C. Liscum, of Topeka.

The registration fee will be \$2.00 which is intended only to cover the expenses of the event. Registration will be limited to the first seventy-five technicians who apply. A banquet will be held December 11 at which Dr. C. C. Nesselrode, of Kansas City, will be the speaker. All members of the Society are invited to have their technicians attend the course. Communications may be addressed to Dr. Helwig, or to Dr. Lattimore.

### MINUTES

The following are the minutes of a meeting of the Committee on Tuberculosis held at the Norton Sanitorium, Norton, on October 8th.

Members present were Dr. Henry N. Tihen, Wichita, Chairman; Dr. C. H. Lerrigo, Topeka; Dr. C. F. Taylor, Norton; Dr. N. C. Nash, Wichita; Dr. F. P. Helm, Topeka; Dr. Omer M. Raines, Topeka. Other members present were Dr. F. L. Loveland, Topeka; Dr. F. C. Beelman, Wichita; Dr. A. L. Ashmore, Wichita. Mr. Fred Lampl, County Commissioner of Sedgwick County was also present and Clarence G. Munns was present as Executive Secretary.

The minutes of the last meeting were read and approved.

The first item of discussion pertained to post-graduate instruction on tuberculosis. Dr. Lerrigo reported that the Kansas Tuberculosis and Health Association has arranged to provide Dr. John Allen as a speaker at an early meeting of the Wyandotte County Medical Society; that his Association has made arrangements to provide a speaker on tuberculosis at the next state meeting; and that it will attempt to assist on this subject in all other ways desired.

Dr. Helm reported that the Kansas State Board of Health has \$750.00 available for a 1939-40 state-wide post-graduate program on tuberculosis. Also that the Board has a Baloptician with seventy-two slides on tuberculosis, movie equipment and movies on tuberculosis available for loan to county medical societies. Dr. Raines, Dr. Lerrigo and Dr. Helm were asked to serve as a subcommittee for preparation of plans for this years' post-graduate programs on tuberculosis.

The tuberculin testing program conducted by the Marion County Medical Society was discussed, and that county was complimented by the committee for its excellent success with this program. Upon a motion made by Dr. Taylor, seconded and carried, it was decided that the committee should ask the Marion County Medical Society to present an exhibit describing this program at the next annual session of the Society. The Executive Secretary was instructed to write the Marion County Medical Society in this regard, and also to express the appreciation of the committee for the tuberculosis work that society has conducted.

The next item of discussion pertained to the dis-

covery of minimal tuberculosis through examination of known contacts. Upon a motion made by Dr. Raines, seconded and carried, the committee agreed to ask the Kansas State Board of Health to have its director of the Tuberculosis Division study and further ways in which contacts of tuberculosis patients can be efficiently and routinely registered and examined.

Recommendation was also made that the Kansas State Board of Health have its director of the Tuberculosis Division devote the major portion of his efforts to the furtherance of tuberculin testing through county medical societies, the furtherance of discovery of minimal cases of tuberculosis, and furtherance of obtaining more complete statistical information on this subject.

Dr. Tihen suggested that the committee might be able to give assistance in the provision of consultation service in interpreting x-ray plates where such is desired by individual physicians. Following discussion of this subject Dr. Tihen presented the following resolution which was seconded and carried.

1. That the committee believes the principles of the private practice of medicine should be followed in the handling of x-ray consultations.

2. That the committee urges physicians who desire x-ray consultations on tuberculosis cases to utilize the services of the radiology specialists of the state.

3. That the radiologists of Kansas at a meeting held on January 15, 1939, agreed they would provide this service without charge to any patient who is deemed to be indigent by the attending physician, and that, therefore, no problem is presented in this connection.

4. That in the instances of x-ray consultations desired for nonindigent patients the committee recommends that the services of a radiologist be utilized with the expectation of paying a fee for that service.

Upon motion made by Dr. Larrigo, seconded and carried, it was recommended that a fee of \$2.50 should be charged for x-ray examination services in connection with diagnostic tuberculosis work on indigent patients, and that fees for nonindigent patients for services of this kind should be affixed in the usual and customary manner.

Upon motion made by Dr. Raines, seconded and carried, it was agreed that the committee should recommend a fee of \$3.00 for pneumothorax treatment of indigent patients instead of \$4.00 as previously recommended.

Upon motion made by Dr. Taylor, seconded and carried, the committee approved the 1939-40 Christmas seal sale to be conducted by the Kansas Tuberculosis and Health Association, and instructed the Central Office to assist this program in any way Dr. Lerrigo desired.

Dr. Tihen was asked to continue as editor of the tuberculosis section of the Journal, and the members of the committee agreed to assist in obtaining articles and material for publication therein.

Upon motion made by Dr. Nash, seconded and carried, the committee suggested that the Advisory Committee of the Norton Sanitorium investigate possible and needed changes in present laws governing admission of patients to the Sanitorium, and that it also attempt to have any changes adopted it believes are necessary. Dr. Taylor was asked to prepare a

statement of the present admission requirements for publication in the Journal.

The following resolution presented by the Kansas State Board of Health was continued until the next meeting of the committee:

"Whereas, the Kansas State Board of Health, by legislative action, is charged with the prevention of Tuberculosis and is represented in this work by its Division of Tuberculosis Control; and Whereas, The State Board of Health recognizes the value of modern clinic service conducted for purposes of diagnosis and case findings as an aid to the eradication of Tuberculosis;

Be IT RESOLVED that the State Board of Health direct the Division of Tuberculosis Control to work out standards of diagnostic Tuberculosis Clinics with the Committee on Tuberculosis Control of the Kansas Medical Society, and present such standards to the State Board of Health for final approval at a future meeting."

Adjournment followed.

A meeting of the Committee on Allied Groups was held in Wichita on October 15th, and a meeting of the Committee on Medical Schools was held at the University of Kansas School of Medicine on November 5th. Meetings of other committees to be held in the near future are as follows: Committee on Maternal and Child Welfare, Topeka, November 12th; Committee on Medical Economics, Topeka, November 26th; Committee on Stormont Medical Library, Topeka, December 11th.

### HEART ASSOCIATION

A Kansas Heart Association was organized by the members who attended the post-graduate course on heart disease held in Emporia on October 16-20. Dr. Philip Morgan was named as chairman and secretary of the organization for the next year; it was agreed that the association shall be a subsidiary section of the Society; decision was made that the organization will meet each year on the Monday preceding the opening of the annual session, and it was also decided that the Association shall hold a post-graduate session each year similar to the one held in Emporia.

### APPOINTMENTS

Governor Payne H. Ratner recently announced the appointment of Dr. Noble P. Sherwood of Lawrence as a member of the Kansas State Planning Board. Other members appointed were: Mr. Walt Neibarger, Tonganoxie; Mr. Paul Kruger, Emporia; Senator W. E. Ireland, Yates Center; Miss Stella B. Haines, Augusta; Mr. Charles Pratt, Pratt; Mr. Ralph Weir, Parsons; Mr. Solon Wiley, Fredonia; Mr. Walter P. Innes, Wichita; Mr. A. M. Shatzell, Hoxie; Rep. John F. Payton, Hoxie; Senator Arnold C. Todd, Wichita; Mrs. E. E. Mattocks, Atchison; Rep. C. I. Moyer, Severance; and Dean E. L. Holton, Manhattan.

### INDICTMENT

The United States Supreme Court announced on October 23rd that it would not review the United States District Court decision in the case brought by the government charging the American Medical Association with conspiracy to violate the Sherman Anti Trust Act. The District Court held that a profession is not a trade and therefore dismissed the indictment. The government appealed this decision directly to the Supreme Court. The refusal to re-

view by the Supreme Court leaves the government only the alternative of appealing to the United States Circuit Court of Appeals. If the Circuit Court of Appeals hears the case, either the government or the Association may ask the Supreme Court to review the opinion of that court.

### PEDIATRICS

A meeting of the Kansas Academy of Pediatrics was held in Topeka on November 1st. Among those who attended were: Dr. E. G. Padfield, Salina; Dr. James A. Wheeler, Newton; Dr. B. I. Krehbiel, Topeka; Dr. P. E. Belknap, Topeka; Dr. R. F. Boyd, Kansas State Board of Health, Topeka; and Dr. F. L. Loveland, Topeka.

The foremost items discussed were: child welfare programs under the Social Security Act; child welfare programs of the Kansas State Board of Health; immunization and vaccination program, quarantine regulations; school health programs, milk control programs, and the possibility of appointing a Society committee on pediatrics.

### MEDICAL BROADCASTS

The American Medical Association commenced its seventh annual public health radio broadcast program on November 2. The program which is entitled "Medicine in the News," is presented by the Blue Network of the National Broadcasting Company, and goes on the air each Thursday afternoon at 3:30 Central Standard Time (4:30 Eastern Standard Time and 2:30 Mountain Time).

The stations in this district that have announced their intention of broadcasting the program are as follows: WREN, Kansas City, Missouri; KANS, Wichita; KOAM, Pittsburg; and KTOK, Oklahoma City, Oklahoma.

### POST-GRADUATE COURSE

The Kansas State Board of Health in conjunction with the Society Committee on Control of Venereal Disease will present a post-graduate course on syphilis and gonorrhea in each Councilor District during the next three months. The speaker for the course will be Dr. Arthur D. Gray, of Topeka. Two meetings, consisting of two lectures on syphilis and two on gonorrhea, will be held at a central location in each of the twelve Councilor Districts.

Dates and places announced to date for the course are as follows: November 6-7, Colby, Opelt Hotel; November 8-9, Hays, St. Anthony Hospital; November 13-14, Leavenworth, National Hotel. The meetings will be held from 4:00 to 6:00 p.m. and 7:30 to 9:30 p.m. each day.

Other dates and places of the course will be announced at a later time.

### MEDICAL HISTORY LECTURES

The Kansas University School of Medicine, in commemoration of the opening of its new Library and Museum of Medical History, will present a series of lectures on Medical History. On October 9, Dr. Sanford V. Lakey, Librarian of the William H. Welch Memorial Library, John Hopkins Medical School, Baltimore, Maryland, gave the first lectures. His subjects were: "Primitive Medicine" and "Egyptian Medicine."

Members of The Kansas Medical Society are invited to attend the lectures and to visit the Library and Museum,





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which will be open to visitors from 2:00 to 4:00 daily except Mondays, Saturdays and Sundays. The following is the schedule of lectures to be given:

January 15, 1940. Dr. John Farquhar Fulton, Professor of Physiology, Yale University Medical School, New Haven, Connecticut.

4:00 p.m. History of Physiology

8:00 p.m. History of Physiology

March 4, 1940. (Date Tentative) Dr. Henry E. Sigerist, Director of the Institute of Medical History and Professor of the History of Medicine, Johns Hopkins University, Baltimore, Maryland.

4:00 p.m. The Methods of Medical History.

8:00 p.m. The Future of Medicine in the Light of History.

March 11, 1940. (Date Tentative) Dr. Chauncey D. Leake, Professor of Pharmacology, University of California Medical School, San Francisco, California.

4:00 p.m. The History and the Development of Therapeutic Drugs.

8:00 p.m. The History of Anesthesia.

### FOLKLORE MEDICINE

The Lawrence Journal-World follows a policy of frequently designating certain persons in that community as guest editors for particular issues. The guest editor is asked to prepare an editorial on any subject he wishes. Dr. H. L. Chambers, of Lawrence, was recently selected as a guest editor and the following are excerpts from the editorial which he prepared:

The expectancy of life is more in the United States than in any other comparable area. There may be several reasons cited, but they could nearly all be arranged under the heading of the lessened lag between the most advanced and folklore medicine. Since medicine concerns itself not only with the prevention, cure, or alleviation of disease, but through these with every matter or thing that in any way interests humankind or touches human welfare, it has to do with food, clothes, housing, recreation, general hygiene, and all the rest. The lessened lag between the most advanced and the folklore practice means that the people appropriate and begin immediately to use the most advanced methods and practice as soon as they are published. It is a pathetic tragedy that they occasionally take up something with no real merit.

\* \* \*

The expectancy of life in Kansas is greater than for any other comparable area or population in the United States. A boy born in Kansas today should live about sixty-two years. If the child proves to be a girl, she may expect about sixty-four years of life. Starting a comfortable life annuity after one is fifty seems to add two more years, but this may only mean that the individual had more money as shown by his ability to buy the annuity or that he had more economic sense as shown by his desire to buy it. The very favorable position of Kansas in this matter may be explained in the same way as that of the United States,—only more so.

\* \* \*

Many practitioners now active can remember that the lag about which so much has been said was around thirty years when they began. It is now around a quarter of a year. More than half the people of Kansas now expect to have sulfanilamide used in streptococcic infections, to have sulfapyridine in pneumococcic infections, to have some form of 606 when indicated, to have the children immunized against diphtheria, to have their appendices and

tonsils out when indicated, to be protected against typhoid fever when they travel, etc. All these and others are done and expected as a matter of course, and entirely "unreflectively".

\* \* \*

It is obvious that folklore medicine modernizes itself just as other systems of thought or practice do, and that it is even now right on the heels of the most advanced and scientific medicine there is. This is preeminently true for Kansas and superpreeminently so for Lawrence.

### MEDICAL CALENDAR

November 17-18. Annual Conference of Secretaries of Constituent State Medical Associations, 535 N. Dearborn, Chicago, Illinois.

November 16-18. American Academy of Pediatrics, Cincinnati, Ohio. Dr. Clifford G. Gurlee, 636 Church Street, Evanston, Illinois, Secretary.

December 1-2. Kansas Hospital Association, Topeka, Jayhawk Hotel.

### SOCIAL MEDICINE

The Pittsburgh Press, of Pittsburgh, Pennsylvania, for October 18, carried the following report of a talk made by Dr. Edward S. Godfrey, Jr., President-elect of the American Health Association, at the annual meeting of that organization held in Pittsburgh, October 17 to 20.

A prelude to the fireworks that will materialize during the impending Congressional fight over the Wagner National Health Bill was viewed here last night in a talk by Dr. Edward S. Godfrey, Jr., president-elect of the American Public Health Assn.

Dr. Godfrey called upon the American Medical Assn. to shed its "hypocrisy" and join in a "constructive national health program" or realize that its objections "will not suffice to dam the current of public opinion."

Citing the "code of ethics," Dr. Godfrey asked why compensation of the physician is not subordinated and the care of the patient made the "primary consideration."

"Why," he asked, "is there such insistence on the "fee-for-service" method of payment?"

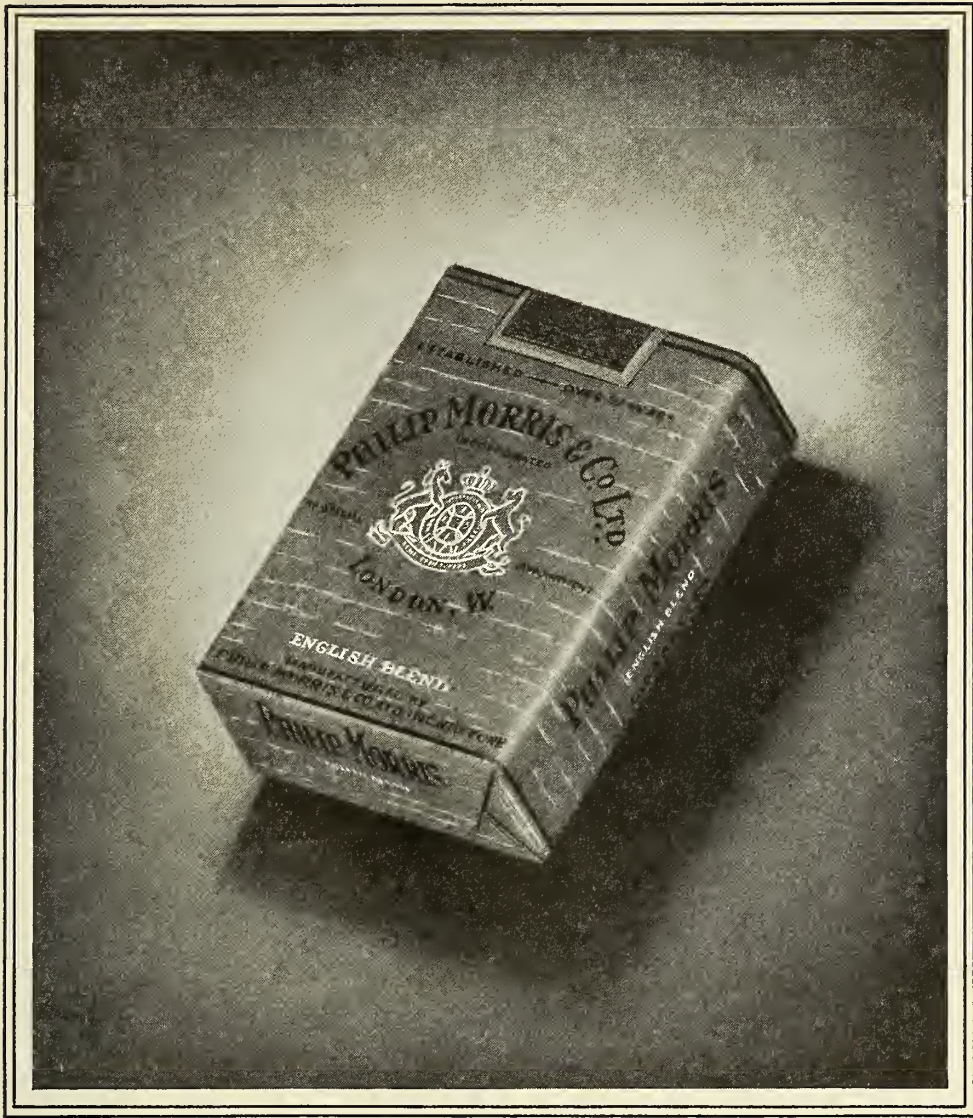
Taking one by one the objections proffered to socialized medicine, Dr. Godfrey insisted that "the present opposition of so-called organized medicine . . . to the expansion of public health service rests on grounds that are hardly tenable."

Without referring to him directly, Dr. Goodfrey took issue with a recent address by Dr. Nathan Van Etten, president of the AMA, who maintained the core of the socialized medicine proposals was contained in the question: Do we want Hitler's or Stalin's medicine or do we want American medicine?

"Anything which becomes law after being duly considered and enacted by an American legislative body, provided it is constitutional and legal, is American and is democratic," Dr. Godfrey said.

He assailed charges of "governmental regimentation," reiterating his "resentment of the imputation . . . that a salary stultifies, that a fee must be received or expected for every service rendered or it will be rendered grudgingly or inefficiently; that men and women in public service are any less worthy in education, in capacity, in interest, in devotion to duty, than





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those who are in what we call 'private life.'"

Moving to the argument that an individual would be stripped of his right to choose his own physician under a socialized-medicine plan, Dr. Godfrey said that "not only the pecuniary success of blatant quacks, but the experience of many communities paying for welfare cases on the fee-for-service basis abundantly demonstrated that the patient's choice may not be a good choice."

He compared the arguments against socialized medicine as "almost counterparts" to those utilized in opposition to the free school system.

Dr. Godfrey urged a conference with the AMA's Committee on the Cost of Medical Care "in the hope that there may be constructive guidance in the effort to legislate for a national health program."

He criticized the Wagner Bill as not going "far enough," and asked socialization of medicine include not only "curative but preventive medicine as well—medicine delivered without distinction as to race, creed, occupation or income . . . for no less than three-thirds of the people."

## COUNTY SOCIETIES

The Butler-Greenwood County Medical Society met at the Susan B. Allen Memorial Hospital, El Dorado, October 13. Dr. Ralph Drake of Wichita spoke on "Brain Tumors." Dr. R. B. Weathered of El Dorado discussed the proposed Food Ordinance for El Dorado.

A meeting of the Clay County Medical Society was held in Clay Center October 18. Dr. John Lattimore of Topeka spoke on "Newer Laboratory Methods and Their Interpretation."

The Montgomery County Medical Society held a meeting on October 20 in Coffeyville. Dr. F. C. Beelman of Wichita spoke on "Value of Tuberculin Testing in the Control of Tuberculosis."

The Shawnee County Medical Society held a joint banquet with the Topeka Bar Association in Topeka on November 6. The program consisted of a skit on doctors presented by the lawyers and one on the lawyers given by the physicians.

The Sedgwick County Medical Society held a meeting November 7, at Wichita. Dr. C. A. Hellwig, of Wichita, spoke on "Coronary Sclerosis" and Dr. F. L. Menehan, of Wichita, spoke on "Embryoma of the Kidney." The next meeting will be held at the Allis Hotel, November 21.

The Wilson County Medical Society held a dinner meeting on October 16, in Neodesha, with the Wilson County Auxiliary as its guests. Dr. B. P. Smith, of Neodesha, presented a paper on "Diabetes." The next meeting of the society will be held in Fredonia, November 13.

The Wyandotte County Medical Society held a dinner meeting in Kansas City, on October 17. Dr. John Franklin Allen, of the University of Nebraska School of Medicine, Omaha, Nebraska, spoke on "Diagnostic Criteria for Recognition of Tuberculosis."

## MEMBERS

Dr. S. N. Chaffee, formerly of Talmage, has taken over the practice of Dr. G. S. Ortman in Solomon. Dr. Ortman

has gone to Columbia Falls, Montana, where he will serve as physician for the CCC camp.

Dr. H. W. Davis of Plains was recently appointed county health officer of Meade County.

Dr. John Kleinheksel of Wichita attended a reunion of the former Mayo Clinic physicians in Rochester, Minnesota, on October 23. He also attended the Inter-State Postgraduate Medical Association of North America at Chicago on October 30-November 3.

Dr. Karl Menninger of Topeka addressed the staff of the Temple University Hospital, in Philadelphia, Pennsylvania, on October 13, and the Neuropsychiatric Division of the Baltimore Medical Society, in Baltimore, Maryland, on October 12.

Dr. Wm. C. Menninger of Topeka was re-elected as Secretary of the Central Neuropsychiatric Association, at a meeting of that organization held in Indianapolis, Indiana, on October 7.

Dr. M. E. Pusitz of Topeka was the author of an article "Speech Correction in Cerebral Palsies" which appeared in the October issue of the Journal of Speech Disorders.

Dr. T. J. Sims and Dr. M. H. Delp of Kansas City were speakers at the meeting of the Central Association of Obstetrics and Gynecology, which was held in Kansas City, Missouri, November 2-4.

Dr. W. W. Warren of Wichita returned from Cleveland, Ohio, October 1st, where he had completed a fellowship in internal medicine at the Cleveland Clinic.

An abstract of the article on "Anemias" which appeared in the February Journal, by Dr. W. W. Weltmer of Beloit, appeared in the October issue of the Digest of Treatment.

## DEATH NOTICES

Dr. Frederick Philip Mann, fifty years of age, died of cerebral hemorrhage, October 16, at his home in Valley Falls. Dr. Mann was born in St. Louis, Missouri, March 10, 1887, and was graduated from the St. Louis School of Medicine in 1904. He moved to Valley Falls in 1907. Dr. Mann was a staff member of the St. Francis Hospital in Topeka, and a member of the Jefferson County Medical Society.

## ANNOUNCEMENTS

Medical service for the Civilian Conservation Corps has, in the past, been furnished by the medical section of the Officers' Reserve Corps with the exception of a few doctors who were employed on a contract basis. A recent decision of the Director of the CCC and the War Department permits the employment of doctors who are not Medical Reserve officers in this service.

Doctors needed for this service may be now employed under the rating of civilian employees. Under date of October 10, 1939, the initial salary was changed from \$2,600 per annum to \$3,20 per annum. No quarters for families are provided, and the doctor will be required to pay for his food at camps. Temporary quarters for the doctor will be provided at the camps for a nominal fee. Doctors selected for this service will be required to pay their own travel expenses to the nearest district headquarters, where they will be put on temporary duty for instructional purposes before



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**GYNECOLOGY**—Two Weeks Course April 15, 1940. One Week Personal Course Vaginal Approach to Pelvic Surgery, April 8, 1940.

**OBSTETRICS**—Two Weeks Course April 29, 1940. Informal Course every week.

**OTOLARYNGOLOGY**—Two Weeks Course starting April 8, 1940. Informal Course every week.

**OPHTHALMOLOGY**—Two Weeks Course starting April 22, 1940. Informal Course every week.

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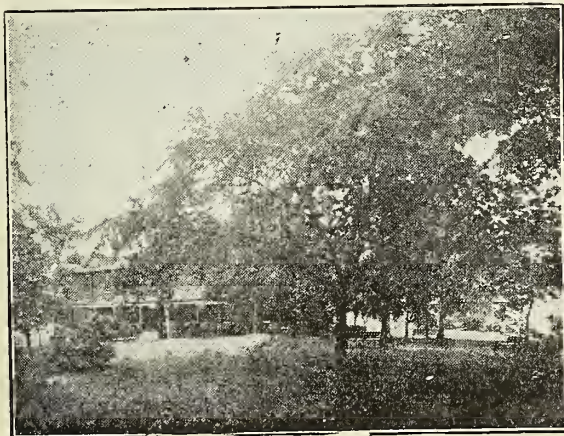
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being sent to camps. Travel expenses incurred in the transfer of doctors from the district headquarters to camps or in the transfer from one camp to another will be paid by the Government. If the services rendered are satisfactory, the employment is more or less permanent.

The principal duties at camps consist of the medical care of the enrollees and the practice of preventive medicine. To be eligible for this service, the doctor must be legally qualified to practice medicine and physically able to perform the duties involved.

All doctors interested in this type of service are requested to submit their applications to the office of the Surgeon, Headquarters Seventh Corps Area, Federal Building, Omaha, Nebraska, giving date when available and preference of assignment in the following states: Minnesota, North Dakota, South Dakota, Iowa, Nebraska, Missouri, Kansas, and Arkansas.

American Board of Ophthalmology, 6830 Waterman Avenue, St. Louis, Missouri: Announce a written examination, March 2nd, 1940, in various cities throughout the country. This will be the only written examination in 1940.

All applications for this examination must be received before January 1st, 1940. All applicants must pass satisfactory written examination before being admitted to oral examination.

Oral examination: New York City, June 8th and 10th. Fall examination to be announced later.

Case reports: Candidates planning to take June examination must file case reports before March 1st.

For application blanks write AT ONCE to Dr. John Green, 6830 Waterman Avenue, St. Louis, Missouri.

American Board of Obstetrics and Gynecology announces the written examination and review of case histories (Part I) for Group B candidates will be held in the various cities of the United States and Canada on Saturday, January 6, 1940, at 2:00 p.m. Formal notice of the place of examination will be sent each candidate several weeks in advance of the examination date. No candidate will be admitted to examination whose examination fee has not been paid at the Secretary's office. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held in June, 1940. Receipt of Group B applications for the current examination (January 6, 1940) closed October 4, 1939.

Candidates for re-examination in Part I (written paper and submission of case histories) must request such re-examination by writing the Secretary's Office not later than November 15, 1939. Candidates who are required to take re-examinations must do so before the expiration of three years from the date of their original examination.

The general oral and pathological examination (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting in Atlantic City, N. J., on June 8, 9, 10, and 11, 1940, immediately prior to the annual meeting of the American Medical Association in New York City.

Application for admission to Group A, Part II examinations must be on file in the Secretary's Office not later than March 15, 1940.

After January 1, 1942, there will be only one classification of candidates, and all will be required to take the Part I and Part II examinations. For further information and application blanks, address Dr. Paul Titius, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

## AUXILIARY

### PRESIDENT'S MESSAGE

After having spent the whole summer at home, my partner and I whisked away to the glorious but windy city of Chicago to enjoy a meeting with his colleagues, and as soon as that was over a trip to New York followed. Here we are in the midst of the hum and buzz of the thundering herd of humanity and machinery. Doctor is doing some extra studying—and I—well I'm enjoying a visit with my sister; but not too far away or too busy to send greetings to my fellow Kansans in our Auxiliary.

Of course we did the Fair. A master piece worthy of any ones time and consideration.

Soon I am to meet with our National Board for more inspiration and help. And from that meeting I hope to bring something concrete to you.

I met with Dr. West and his Committee about two weeks ago, at which time plans for more definite public relations work were discussed. In a short while your respective auxiliaries will have this plan in their hands.

It is my earnest hope that each one who reads these messages will feel it her responsibility to contact her auxiliary neighbor and bring her into the fold. We need more of us to put the message over to the lay people. It is important that we talk intelligently on these matters. Let's do our best to make known to the public the value of our doctors and the good they constantly are doing in their respective communities.

October first marked the beginning of our Hygeia campaign, and I hope that each will do her part to interest some one in subscribing to such an instructive and helpful publication. Remember your friends at Christmas with a subscription. That will be a lovely gift and something which will last all through the year.

With best wishes from afar, and until next month I'll say Au Revoir.

Mrs. La Verne B. Spake

### AUXILIARY NOTES

The Shawnee County Auxiliary has for its chief objectives this year an increase in Hygeia subscriptions (Shawnee County was among the leaders last year) and a membership drive. The campaign for Hygeia subscriptions is going ahead promisingly at the present time. A tea for all doctor's wives eligible for auxiliary membership is planned for the near future. This activity was planned at their October meeting. The September meeting was a luncheon at the home of Mrs. C. F. Atwood, with the new officers as hostesses. Plans for the year were discussed at the luncheon.

The outstanding work of Mrs. C. D. Kosar, Cloud County Auxiliary, in cancer control activities was recognized recently by Mrs. Donald Muir, commander of the Women's Field Army of Kansas, who appointed Mrs. Kosar as a Deputy State Commander in charge of two districts.

The Sedgewick County Auxiliary met Monday, October 9, for their first meeting of the season at the Innes Tea Room. Greetings from The Medical Society were extended by Dr. F. J. McEwen. Mrs. Gladys Krebiel, of Moundridge,



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<sup>1</sup> "Twenty-five years of Health Progress"—Metropolitan Life Insurance Co., 1937; Pages 339-340.

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gave a program on Art which was supplemented by a display of numerous objects collected during her travels abroad. Officers for 1939-1940 are: President, Mrs. J. S. Reifsnider; Vice-President, Mrs. C. H. Warfield; President, Mrs. Harvey Hodson; Secretary, Mrs. C. K. Wise; Treasurer, Mrs. V. L. Pauley. Committee Chairmen: Program, Mrs. W. J. Bierman; Social, Mrs. C. H. Warfield; Membership, Mrs. C. C. Brown; Hygeia, Mrs. A. E. Hiebert; Public Relations, Mrs. Ralph Drake; Nominating, Mrs. Charles Rombold; Historian, Mrs. Harold Hyndman; Publicity, Mrs. L. E. Knappe.

### EDITORIAL NOTES

All literature which comes to this department emphasizes the vital importance of public relations work at the present time. In an article of considerable length in the October Bulletin of the Woman's Auxiliary to the American Medical Association Mrs. R. E. Mosiman, National Chairman of the Public Relations Committee lays special stress on the advisability of placing our information on health questions and medical economics before the members of civic organizations. As reasons for this course of action the following excerpts are quoted from her article: . . . "The critical attitude of many politically and socially minded individuals is often unfair and irrational. Such individuals, favoring compulsory health insurance or some system of state medicine, are directing a well-organized campaign against organized medicine. As a result of this campaign, the public is receiving a totally false impression of the attitude of the medical profession with regard to health issues, as well as an equally false impression of the benefits to be derived from socialized medicine."

"The Committee of Public Relations will be betraying it's trust to the public if it fails in its duty to provide authentic information on the disadvantages which will accrue from systems of managed medicine. It will betray its trust to the medical profession if it fails to present the attitude of the profession on the National Health Issues."

Mrs. Mosiman gives comprehensive directions for procedure in the work advised. A study of her article and references given will result in a well informed membership if all county public relations chairman will present it fully to their membership.

The former "News Letter," of the Woman's Auxiliary to the American Medical Association is now named "Bulletin of the Woman's Auxiliary to the American Medical Association" and is printed in most attractive make up in place of the former mimeographer style. Its contents crowds eighteen pages with instructive and interesting letters from national officers and chairmen as well as news. It one reads it, one finds the enthusiasm and zeal of the authors contagious.

Mrs. W. G. Emery, Chairman,  
Press-Publicity.

"Tuberculosis is the captain of the men of death." John Bunyan.

The treatment of pulmonary tuberculosis demands little knowledge of drugs but much about the immediate and prolonged education of patients. Brown, Lawrason, Tuberculosis Theses.

### BOOK REVIEW

**THE VITAMINS: A Symposium Arranged Under the Auspices of the Council on Pharmacy and Chemistry and the Council on Foods of the American Medical Association.** Imitation leather. Price, \$1.50 postpaid. pp. 637. Chicago: American Medical Association, 1939.

So much information has become available about the vitamins, that it is difficult even for experts to keep up with the literature. The present volume is a welcome compendium of authoritative information about these accessory food factors. There are discussions of the chemistry, physiology, pathology, pharmacology and therapeutics, methods of assay, food sources and human requirements of each of the important vitamins. The volume is composed of thirty-one chapters written by experts, and is published under the auspices of the Council on Pharmacy and Chemistry and the Council on Foods of the American Medical Association.

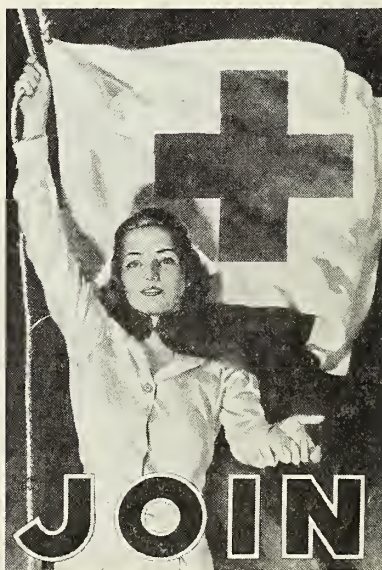
This book should prove to be an indispensable volume for the library of every physician.

### BOOKS RECEIVED

**TREATMENT BY DIET**—Clifford J. Barborka, B.S., M.S., D.Sc., F.A.C.P., Department of Medicine, Northwestern University Medical School, Chicago; Formerly Consulting Physician, The Mayo Clinic. Fourth Edition, Revised and Published by L. B. Lippincott Company, Philadelphia. Containing 691 pages, illustrated. The five parts include: Diet in Health; The Application of Diet Therapy; Diet in Disease; Routine Hospital Diets; and an Appendix.

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**PRACTICE OF ALLERGY**—Warren T. Vaughan, M.D., Richmond, Virginia. Published by The C. V. Mosby Company, St. Louis, Missouri, 1939. Containing 1082 pages, 338 illustrations and sixteen parts, the titles of which are as follows: Steps in the Development of Our Present Understanding of Clinical Allergy; The General Characteristics of Clinical Allergy; The Physiology of Allergy; Allergic Diagnosis; Diagnosis and Treatment of Food Allergy; Food Allergens; Pollens and Pollinosis, and Other Inhalant Allergy; Bacteria; Fungi; Anaphylactic Shock; Drugs; Contact Allergy; Physical Allergy; Pharmacology; and The Allergic Diseases.

**VARICOSE VEINS**—By Alton Ochsner, B.A., M.D., D.Sc., F.A.C.S., and Howard Mahorner, B.A., M.D., M.S. (Surgery), F.A.C.S. Published by The C. V. Mosby Company, St. Louis, Missouri, 1939. Price \$3.00 per copy. The volume has 147 pages, fifty text illustrations and two color plates. Contents include: History of the Treatment of Varicose Veins; Anatomy of the Veins of the Lower Extremity; Pathology; Physiology; Etiology; Clinical Aspects; Examination of the Varicose Vein Patient; Treatment; and Treatment of Varicose Ulcers.

**OTOLARYNGOLOGY IN GENERAL PRACTICE**—By Lyman G. Richards, M.D., Fellow in Otolaryngology, Courses for Graduates and Assistant in Surgery, Harvard Medical School, Associate Professor of Otolaryngology, Tufts Medical School Research Associate in Otolaryngology, Children's Hospital, Otolaryngological Surgeon, Peter Bent Brigham Hospital, Boston Massachusetts. Published by the Macmillan Company, New York, 1939. Containing 352 pages, illustrated. Price \$6.00 per copy. Contents include the following chapter titles: Introduction; Examination of the Patient; Examination of the Ear; Pain in the Ear; Aural Discharge; Deafness; Dizziness and Vertigo; Tinnitus Aurium; Anatomy and Examination of the Throat; Sore Throat; Tonsillectomy and Adenoidectomy; Examination of the Nose; Lesions of the External Nose, Epistaxis; Nasal Obstruction; Nasal Discharge; Respiratory Obstruc-

tion; Intubation and Tracheotomy; Hoarseness; Cough; Dysphagia; Headache; and Index.

**FUNCTIONAL DISORDERS OF THE FOOT, THEIR DIAGNOSIS AND TREATMENT**—By Frank D. Dickson, M.D., F.A.C.S., Orthopedic Surgeon, St. Luke's, Kansas City General, and Wheatley Hospitals, Kansas City, Missouri, and Providence Hospital, Kansas City, Kansas; and Rex L. Diveley, A.B., M.D., F.A.C.S., Orthopedic Surgeon, St. Luke's, Kansas City General, Research, and Wheatley Hospitals, Kansas City, Missouri, and Providence Hospital, Kansas City, Kansas. Published by L. B. Lippincott Company, Philadelphia, 1939. Price \$5.00 per copy. Containing 305 pages and 202 illustrations. Chapter titles are as follows: Evolutionary Development of the Human Foot; Anatomy; Physiology; Primary Causes of Foot Imbalance; Examination; The Foot of Childhood; Foot Imbalance in Childhood; Foot Imbalance in Adolescence; Foot Imbalance in the Adult; Foot Apparel; Hallux; Affections of the Nails; Affections of the Skin; Affections of the Tarsal Metatarsal Bones; Affections of the Heel; Constitutional Diseases Affecting the Feet; Foot Strapping; and Foot Exercises.

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Campbell "OPERATIVE ORTHOPEDICS"—This new book was written to meet the current need for a comprehensive work on operative orthopedics, not only for the specialist, but also for many industrial and general surgeons. By Willis C. Campbell. 1154 pages, 845 illustrations, 4 color plates. Price, \$12.50.

Vaughan "PRACTICE of ALLERGY"—This new book gives new methods of diagnosing and treating allergy problems. Eleven chapters are devoted to Allergic Diagnosis. Trial diets, elimination diets, etc., take up another 62 pages. 8 chapters are devoted to Allergic Diseases. The methods of treatment recommended are those the author has found effective. By Warren T. Vaughan. 1082 pages, 338 illustrations. Price, \$11.50.

Scherf & Boyd "CARDIOVASCULAR DISEASES"—This book supplies a considerable amount of practical information on heart diseases by brief discussions for direct application to diagnosis and treatment without recourse to complicated methods and apparatus. Emphasis has been placed upon the common and practical problems. By David Scherf and Linn J. Boyd. 458 pages. Price, \$6.25.

Sutton & Sutton "DISEASES of the SKIN"—Sound and effective treatment is featured throughout the new Tenth Edition of this popular books. Descriptions of all significant entities, syndromes, and concepts, and of many exotic, unusual, and even exceptional dermatoses have been incorporated. By R. L. SUTTON and R. L. SUTTON, JR. 10th Ed. 1549 pages, 1542 illustrations, 21 color plates. Price, \$15.00.

Jackson "EXPERIMENTAL PHARMACOLOGY and MATERIA MEDICA"—It is imperative that every man in active practice know and understand what effect a drug is likely to have on his patient when it is administered to him. This knowledge is available in this book. Every practicing physician using drugs can use this book to advantage. By Dennis E. Jackson. 906 pages, 900 illustrations. Price, \$10.00.

Bing & Haymaker "TEXTBOOK of NERVOUS DISEASES"—The subject of neurology as presented in this English translation attains almost the exactness of mathematics. Bing has elaborated on the latest advances in neurology in Europe, has unfolded his own immense experience based on the minute and painstaking observations, and has brought to the practitioner precise therapeutics in applicable form. Translated and Enlarged by Webb Haymaker. 850 pages, 207 illustrations, 9 color plates. Price, \$10.00.

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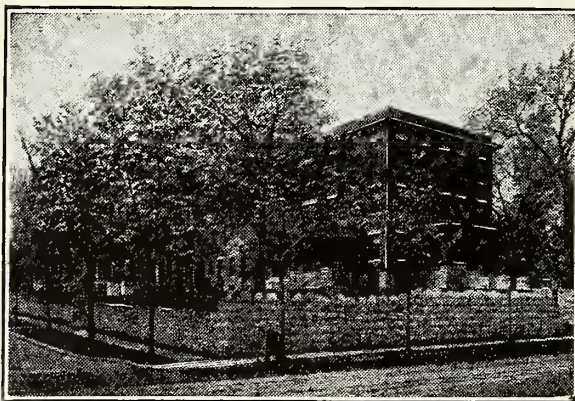
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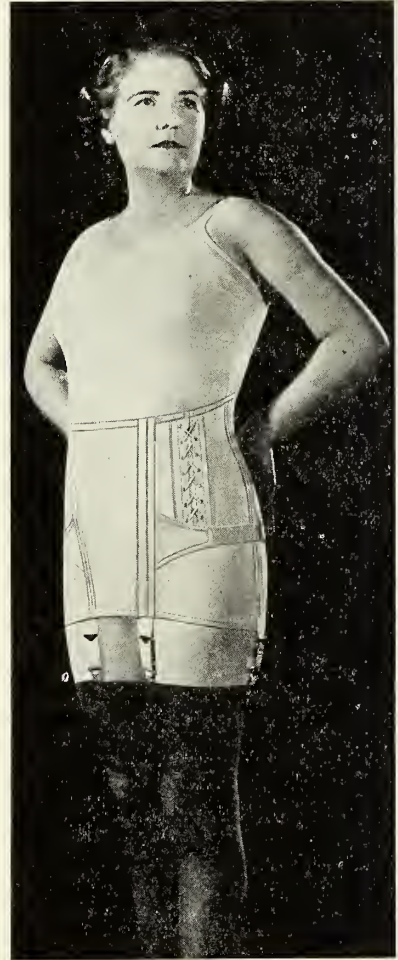
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# PRENATAL SUPPORTS

In writing of prenatal care in a work on Gynecology and Obstetrics\*, we read under "Clothing" as follows: "A special corset is not necessary during the first 4½ months of pregnancy if the patient is not accustomed to its use. After this time, a corset should be worn whenever the patient is active. The corset should extend well down over the hips, but need not reach higher on the abdomen than the umbilicus. It should possess front or side lacings to allow for gradual abdominal expansion, and the material should be of light texture. A properly fitted corset which is comfortable does not in any way interfere with the normal expansion of the abdomen or with the health of the baby, and is necessary to prevent undue stretching of the musculature of the abdominal walls and to afford proper support for the back."

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\*Gynecology and Obstetrics, Vol. I, Chapter V, Page 44, Carl Henry Davis, Editor. Published by W. F. Prior Co., Inc., Hagerstown, Md.

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## ACUTE HEMATOGENOUS OSTEOMYELITIS\*

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In the discussion of such a complex subject as Osteomyelitis, I will try to limit my remarks to a consideration of the acute hematogenous form, rather than try to treat the entire subject of osteomyelitis.

From the historical standpoint it is interesting to learn that in the remains of prehistoric animals there have been found bone changes similar to those caused by infection. It was not, however, until the fourteenth century that John Ardenne advocated the removal of the dead bone fragments. Scultetus in 1634 is credited with being the first to resect the shaft of a long bone for infection. In 1705, J. L. Petit described an acute disease of the long bones and Nelaton in 1834 suggested that the term "osteomyelitis" be used to designate infection of bone. In 1896, Loxor produced acute hematogenous osteomyelitis in rabbits and described the pathological features while Senn in 1895 observed that the primary focus was to be found in the metaphysis, and advised early drainage of the bone as the treatment of choice. In 1922, the late Clarence Starr published his practical and famous paper on acute hematogenous osteomyelitis proving that it is a circulatory disease, and suggested early drilling of the bone in the region of the metaphysis as the most satisfactory method of treatment.

Acute hematogenous osteomyelitis is a blood stream infection, and is most frequently seen in young children, although the acute form in the long bones has been reported in adults. The adult form, however, differs very markedly from the disease of childhood as Zadek has so well pointed out in his report of nine cases. Statistics from our own Orthopaedic Department show that ninety per cent of all cases have involved either the tibia or femur in the acute infection, and that the condition is almost

always the result of either staphylococcus or streptococcus infection.

## PATHOLOGICAL ANATOMY

A brief review of the physiology of bone serves to refresh our memory and explain more clearly the clinical picture encountered. Long bones are formed of three different and important varieties of tissue; the bone tissue proper, the marrow tissue and the peripheral fibrous vascular membrane—the periosteum. The bone tissue proper is made up of cellular elements and matrix, while the marrow tissue is richly vascular containing numerous thin-wall capillaries, veins, and arteries and filled with two varieties of bone marrow, the yellow and red. For many years the limiting membrane about the bone has been the subject of numerous controversies. The periosteum is a richly vascular fibrous membrane possessing two well recognized layers and at full growth the periosteum becomes firmly adherent to the shaft of the bone. In childhood the connection except at the epiphyseal line is much less marked. At the epiphyseal end the periosteum dips into the epiphyseal line and is firmly adherent to the epiphyseal cartilage. This point is of great practical importance in regard to the spread of the infection as shown by Figure 1. Circulation to the long bones is supplied by the nutrient artery which perforates the cortex at about its middle and immediately divides, one branch going toward each extremity. This vessel and its tributaries supply the medulla and the endosteum and anastomose freely with the cortical vessels through the haversian canals. In addition to this main source of supply, the cortex is supplied by the periosteum and the epiphysis is supplied from the cortical vessels following the line of the epiphyseal cartilage. In brief then, the long bones are made up of two spongy ends, while the shaft between is incased in this thick soft membrane called periosteum and the hollow canal in the shaft is lined with the endosteum and filled with marrow tissue. Included in the deep layer cells of the periosteum are the osteogenetic or regenerative type of cells. This type of cell is also found in the endosteum to a much less degree. In the spongy ends of the bone or metaphyseal areas are located the capillary loops where there is marked slowing of the blood stream and sedimen-

\*Read before the Shawnee County Medical Society—October 2nd, 1939, Topeka.

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tation or pooling of the blood may occur in the venous spaces. Loxor and his co-workers believed that the purulent foci were of embolic origin, the emboli coming from the thrombophlebitis produced at the primary site of infection which they believed to be in the metaphyseal region. This generalized disease may have a predisposing cause that lowers the general resistance of the individual, but as a rule local trauma plays the important part in localization of the infection. Following any infection or minor injury the virulent staphylococci living on the skin as saprophytes may become invasive and the offending organism after circulating in the blood reach the capillaries in the metaphyseal region of the long bones. Due then to the lowered local resistance, small inflammatory areas may begin in the metaphyseal region. This small minute abscess spreads and thrombosis contributes to the bone necrosis so that the destructive phenomena of osteomyelitis—i.e.—necrosis and bone caries ensue. Within twenty-four hours a definite change may be noted and the grayish necrotic parts become surrounded by an increased hyperemic zone. The infection ordinarily spreads through blood vessels to the medullary canal, then through the haversian canals to the periosteum. The periosteum is easily raised from the cortex in children and the infection spreads more or less rapidly, depending upon the virulence of the infectious organism, and upon the resistance of the patient. After formation of this localized abscess, the neighboring joint, if the epiphysis is extra-articular, is usually protected from the spread of the infection by firm attachment of the periosteum at the epiphyseal line. But if intra-articular, the infection often ruptures into the joint space giving rise to a pyarthrosis. It rarely happens that direct extension occurs through the epiphysis and through the articular cartilage, but the usual course is that several abscesses coalesce and then under pressure begin migrating subperiosteally by ways of the haversian canals.

This disease is most common between the ages of two to ten and boys are more frequently affected than girls. It must always be remembered that in acute hematogenous osteomyelitis the disease of the bone is secondary to the infection elsewhere in the organism. The tendency of the staphylococcus organism to localize itself and grow in a place already injured mechanically has been well shown experimentally. Rabbits have had several ribs and long bones traumatized and following subsequent injections of staphylococcus aureus, abscesses have been repeatedly produced at the site of each traumatized bone.

#### CLINICAL PICTURE

The symptoms may be very mild but usually pain is a constant, early and prominent feature of acute

osteomyelitis. The primary focus may be a sore throat, draining ear, infected tooth, or commonly a skin lesion such as a boil or carbuncle. Such skin lesions have suggested the possibility that in certain cases the drainage may be of a reversed mechanism to that ordinarily considered; namely, local trauma, subperiosteal hematoma, infection of the hematoma with subsequent periostitis, and direct extension into the medullary cavity. However, it should be remembered that the great majority of cases occur from a transient associated bacteriemia. Localized tenderness over the underlying bone infection with swelling of the soft parts and usually chills, fever and high blood count are characteristic. There may be signs of toxemia, such as headache, dry tongue, malaise, vomiting with a rapid pulse rate and a rather high temperature of 103 to 106. During this acute stage of the disease the infection is usually confined to the interior of the bone and during the first twenty-four or thirty-six hours a very careful physical examination may locally reveal meager findings and the balance of the decision rests upon the laboratory findings, including the possibility of a positive blood culture. Shortly thereafter, however, symptoms of localized pain and swelling will manifest themselves and movement in the adjacent joint may be restricted and painful with obliteration of the normal joint contour. With the perforation of the periosteum by the abscess in the later stages there will be a constant release of tension giving rise to a diminution of the pain and toxic symptoms. An overwhelming virulent infection may give rise to multiple foci and a rapidly progressive toxemia. As a rule the infection rapidly becomes localized and the diagnosis can be made from the history received and the signs and symptoms present.

Rarely is the roentgenogram of any aid whatsoever in early diagnosis.

It is generally agreed that the staphylococcus is the predominating invading organism. Grier and Shannon reported a mortality of nineteen per cent with streptococcus, but there was a mortality of forty-one per cent with staphylococcus. To the above clinical picture found in acute hematogenous osteomyelitis in children must be added a slightly different picture in cases of acute osteomyelitis in adults. Here the onset is slow and insidious and the development of the lesion is gradual in all but exceptional cases. Since the periosteum is more firmly adherent to the bone in adults, the development of subperiosteal abscesses is unlikely and the spread is chiefly through the central canal, resulting in the thickening of the shaft and periosteal bone production, but rarely sequestration. A roentgenographic picture is different from that noted in children, and may be



confused with that of endothelioma while pain in acute osteomyelitis in the adult is not severe, and the temperature is moderate or low. It also differs from the disease in children in that there seems to be no tendency to metastatic involvement in the adult type.

It is however, in the acute osteomyelitis of childhood that we are particularly interested and it should be emphasized that roentgenographic changes cannot be detected in the bone in the early stage and that the very pernicious habit of watchful waiting for bone changes is to be deplored and condemned. It is probable that in the average case at least ten days must elapse before roentgenographic evidence of bone destruction can be demonstrated. Figure 3 and 4. The earliest roentgenographic change will show a rarefaction of cancellous bone near the epiphyseal line on the diaphyseal side. This early sign may be more apparent if films are taken of the opposite side as a control.

While the bacteriemia or septicemia is usually present at some time in the disease, the culture will only be positive at certain times of the disease and it is generally agreed a positive culture may be often difficult to demonstrate from the blood in a known case of acute hematogenous osteomyelitis. A positive blood culture obtained on consecutive days is of some prognostic benefit, for in Crossan's excellent review of the subject, he found that in a group of seventy-two positive blood cultures, forty-two per cent of these patients died.

It should be noted at this point that the question of the infection occurring in patients of different ages should be given careful consideration for osteomyelitis in infants is different in so many respects from the same disease found in older children. We usually think of acute osteomyelitis as that of a syndrome seen in children from two to ten, due particularly to the staphylococcus aureus in around ninety per cent of the cases. And in this age group, if early treatment is not instituted, sequestration, persistent sinuses and frequent recurrences are the rule. In osteomyelitis, however, in infants under two years of age, the disease is much more frequently due to the streptococcus hemolyticus in which if the child survives the acute infection complete cure and rapid recovery may be expected. This osteomyelitis in infancy is severe and there is a relatively brief duration. Sequestration, recurrences, and residual lesions in the bones are unusual.

### COMPLICATIONS

Cellulitis has been mentioned as being confused with acute osteomyelitis, but any cellulitis secondary to osteomyelitis is a late sign and should not be a

confusing point in the diagnosis of the early infection. Pyarthrosis should be always looked for, especially if there is present a resistant flexion deformity, marked muscle spasm and pain on motion of the adjacent joint. This complication can be expected at such sites as the upper and lower ends of the femur and the lower end of the humerus, for the metaphyses are partly intra-articular and are infected by direct extension. In Brisgard's series of fifty-one cases of pyarthrosis, restoration to normal function in the joint occurred in only 13.2 per cent.

### PROGNOSIS

This disease has a poor prognosis as regards the restoration of normal structure and function. It is said that the percentage of surviving healthy children is approximately forty per cent of the total afflicted. In a general way it may be stated that patients with a streptococcus infection make a better recovery than those with staphylococcus, and it has been estimated that ninety per cent of all deaths from acute hematogenous osteomyelitis occur in the first two weeks of the disease. One may point out that a history of previous recurring skin infections is of serious import because it indicates insufficient resistance to the organism. Frazier has pointed out that the nearer the focus to the trunk and body centers, the more gloomy is the prognosis, while the blood count with a leukocyte count of 20,000 and polymorphonuclear count of seventy-five per cent is a favorable sign.

### TREATMENT

The treatment of acute hematogenous osteomyelitis must in part be decided according to the individual problems presented. There is a constant conflict between the general resistance of the patient and the virulence of the organism and an accurate determination of these two factors may require the utmost skill and diagnostic ability of the surgeon. The surgeon must try to appreciate the pathological picture present in order that he may be able to aid and protect the patient by various types of supportive treatment, and by giving proper drainage at the right time and at the right place. A marked diversity of opinion exists among surgeons concerning the time to operate in acute hematogenous osteomyelitis. We believe that the treatment should be divided into two portions. First, immediate emergency general supportive treatment. Second, early conservative operative treatment. Undoubtedly opinion has definitely swung away from radical surgery in the past few years and at present if surgery is indicated it should be conservative surgery, for there cannot be the slightest excuse for the old practice of widely opening the bone along the length of the shaft ex-

posing the medullary canal for a distance equivalent to the subperiosteal stripping; the so-called gutter operation. This method cannot be too strongly condemned and an understanding of the underlying pathology should make clear the futility and the danger of such treatment. It is of paramount importance to determine the general condition of the patient and his appearance may be the determining factor in deciding upon the time best suited for operation. In those instances in which the patient is dehydrated and toxic, or in a severe state of shock, an operative delay is almost always indicated until supportive measures can be instituted. Gentleness in handling these patients, combined with blood transfusions or large amounts of infusions of saline or glucose two to four-thousand cc, with sedation on admission and splinting of the part, is time well spent, for as a rule the prognosis is better when the operation is delayed until the local focus is reasonably well established. Many of these acutely ill patients with poor general condition and obvious toxicity have been pushed over the brink by immediate operation, and we feel very strongly that this type of patient will benefit by the conservative therapy outlined above rather than emergency operative measures. If, however, we are dealing with a severely ill patient in which the general condition seems satisfactory and there is evidence of a spreading infection, immediate operation is advisable. This should usually consist of simple incision and drainage with or without drilling of the bone, as emphasized by Farrell many years ago. If there is a large fluctuating abscess which obviously needs draining, a small skin wound will be adequate, and in certain instances simple aspiration of the abscess with a large bore needle is satisfactory. These patients should be kept perfectly quiet by sedation and if feasible by some form of plaster splinting. If we are dealing with those patients whose infection appears to be rather mild and who are not acutely ill, operative delay is advisable aided by chemotherapy and supportive treatment. This brings up the matter of utilizing the new drugs that have recently received so much publicity, sulfanilamide and sulfapyridine. The literature is beginning to be filled with warnings and occasional complications following the use of these drugs, and these dangers must be borne in mind. However, we feel that every attempt should be made early to determine the type of organism present and as has been pointed out by Key, acute hematogenous osteomyelitis occurring in a child under two years of age will probably be caused by the streptococcus, whereas in those over two the probabilities are that staphylococcus is the invading organism. The usefulness of these drugs cannot be

minimized, and in spite of their occasional danger we feel that their early use in large doses is advisable, but that they should not be continued beyond a point where the natural defenses of the body appear able to take over. The value of transfusion cannot be stressed too much, usually these children do better with small transfusions of two to three-hundred ccs repeated every few days rather than a large transfusion at any one time. We feel, therefore, that the blood-borne infection of bone can be most satisfactorily treated by immediate supportive treatment and very conservative surgery, consisting of aspiration of abscess, simple incision and drainage, or drilling, depending upon the stage of the process and condition of the patient. It must be remembered, however, that one should not expect a dramatic ending of the clinical signs and symptoms following any type of treatment.

As regards the type of operation, the drilling of the bone by two or more drill holes should be in the direction of, but not into, the epiphyseal plate as in Figure 2 (Starr). This was described many years ago by Starr and seems to be the ideal method when drainage of the metaphysis is desired. The wound should then be lightly packed with vaseline gauze and over the sheet wadding a light plaster casing applied for physiological rest and prevention of deformity of the affected extremity. With this conservative operation we are content, and while occasionally our desire for drainage in suspected cases has made us operate upon some cases of mistaken diagnosis we agree with Conwell who states "I would rather operate upon a case of mistaken diagnosis of acute osteomyelitis than to fail to operate upon one which has been proved to be an acute case, for in only a very small number of our cases operated upon early was there any marked bone changes or metastatic involvement".

We feel that we should interject at this point a word regarding treatment of acute osteomyelitis in the adult. Pain in this type of disease is not severe, and the temperature is moderate or low. The treatment in the adult, we feel should consist of the removal of a window in the cortex followed by the usual Orr method of treatment.

We have treated a few cases of chronic osteomyelitis with the use of maggots and have been satisfied that it is a valuable method of treatment. In the acute osteomyelitis, however, we do not feel that it has established itself as a method of much value. Shands and Baker have advocated the use of staphylococcus antitoxin in the treatment of staphylococcemia and have reported sixty-five cases upon which it has been used in combination with incision and drainage. The technique of safely administering this is



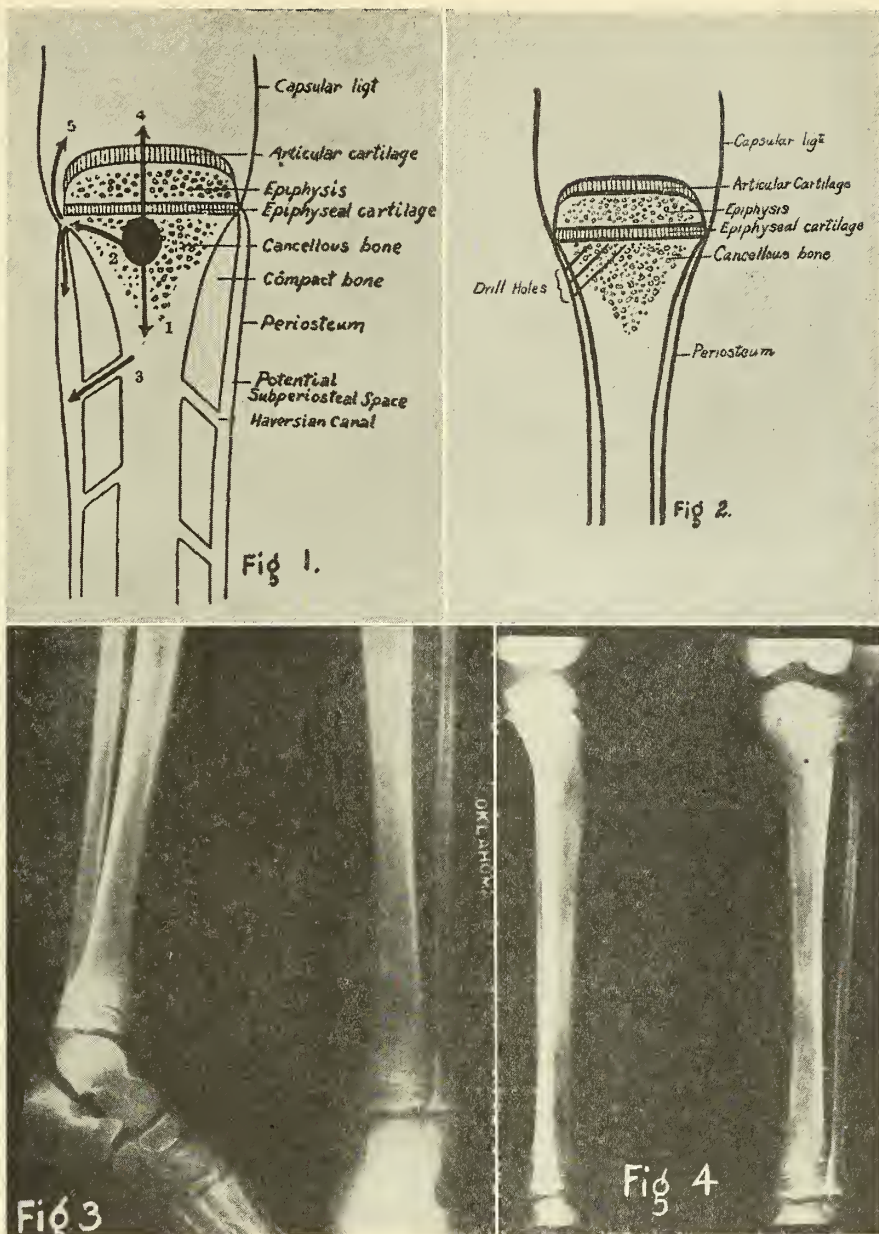


Fig. 1. Sketch showing commonly accepted directions of spread of infection (Choyce).

Fig. 2. Diagram showing direction of drill holes. (Starr.)

Fig. 3. Roentgenograms illustrate a case of acute hematogenous osteomyelitis taken at ten day interval. Fig. 3 is negative for any bone change and Fig. 4 shows early beginning bone destruction of almost the entire tibia, as proven by subsequent roentgenogram.

rather complicated and they advise the daily measurement of antitoxin in the blood stream. Toxoid in the hands of Robertson has given very satisfactory results, but our limited experience with it does not allow us to discuss the method.

#### SUMMARY

In acute hematogenous osteomyelitis we are dealing with a dangerous enemy which takes a tremend-

ous toll annually among the young children of our country. An evaluation of the natural defenses of the body versus the infective organism must be carefully and individually studied, for as a rule the value of supportive treatment and the extreme body fluid depletion that these patients suffer has been underestimated by the profession.

The spread of the infection is by direct extension

and by metastases, at first being localized to a single metaphysis. This makes it the responsibility of the surgeon as far as possible to combat the disease by both general and local measures. As the involvement is not primarily in the cortex of the bone or the medullary cavity but limited to the metaphysis, conservative surgery, when surgery is indicated, should be directed toward this area. Or, if the disease has perforated the thin cortical wall of the affected metaphysis, one may expect extension into any of the surrounding tissues. Its extension into the adjacent joint will depend upon whether the epiphysis is intra or extra-articular. If drilling into the metaphysis can be made subsequent to the extension of the disease, the joint can be saved and many times necrosing and sequestration of local bone tissue averted.

### BIBLIOGRAPHY

1. R. Jones and L. Roberts—S.G. & O., 65—753-770, December, 1937.
2. Starr, Clarence L.—Archives of Surgery—4, 567-584, 1922.
3. Zadek, I.—Archives of Surgery—37, 531-545, October, 1938.
4. Grier, W. T. and Shannon, J. G.—Archives of Surgery, 32, 462-493, 1936.
5. Crossan, E. T.—International Abstracts Surg., 66, 176-183.
6. Briggard—S. G. & O., 55-74, 1932.
7. Key, J. A.—Journal Amer. Med. Ass'n.—111, 2163-2168, December 10, 1938.
8. H. Earle Conwell and J. D. Sherrill, So. Med. Jour., 30-171, 1937.
9. Fraser, Lancet 2, 586, 1936.
10. Shands, A. R. and Baker, L. D., Unpublished data.
11. Robertson, D. E., Jour. Bone & Joint Surg., 20, 35-47, January, 1938.
12. Macey, H. B., Surg. Clinics of North America, 18, 1131-1142, August, 1938.
13. Renfrew White, Chronic Traumatic Osteomyelitis, Paul B. Hoeber, 1919.
14. Wilson, J. C. and McKeever, F. M., Jour. Bone & Joint, 28, 328-332, Apr. 1936.

## CHRONIC BRUCELLOSIS AS A MAJOR CAUSE OF NEURASTHENIA\*

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That chronic undulant fever is a definite, if not a common, cause of neurasthenia is being more generally recognized. Huddleson writes, "There is no question but that chronic brucellosis is responsible for many cases of so-called neurasthenia. The great difficulty is in separating the actual cases of brucellosis from those that are not brucellosis". A large per cent of our population for years no doubt has been exposed to brucella infection thru the consumption of unpasteurized dairy products. Inadequate laws governing pasteurization exempt relatively few from exposure even today. Many who rebel at the use of raw milk think nothing of eating butter or

cottage cheese made from unpasteurized cream. Furthermore, dust and soil contaminations from infected cow, swine and goat excreta used to fertilize vegetable and truck gardens undoubtedly will be found as new and hitherto unsuspected sources.

A survey of the dairy herds of the United States in 1937 showed that 38.4 per cent of all herds comprising half of the country's dairy cows were infected with Bang's disease, and of nearly twelve million cows tested eight per cent were positive reactors. Angle reports nine per cent of 7,122 Kansas City, Kansas children of school and pre-school ages and twenty-seven per cent of 163 known exposed inmates of a Kansas county farm to be positive skin reactors. Gould and Huddleson in Michigan, testing an institutional population of 8,124 known to have consumed products from an infected dairy herd found 845 or 10.3 per cent showing positive brucellergin reactions with percentages varying from 6.2 to 15.4 in the various groups depending upon the average duration of opportunity for infection. Conservatively estimating that if thirty per cent of our population of 130 millions use or have used unpasteurized dairy products and that if five per cent of these develop the disease in acute or chronic form, we reach the surprising estimate of two million potential brucellosis sufferers in the United States. Contrary to DeJong's statement that "it is seen mainly in farmers, butchers, and handlers of live stock", I find it frequently among a varied and high class urban population. No table in the land is exempt from the brucella as an unsuspected guest unless it be one which consistently uses only pasteurized dairy products and which never serves raw vegetables and whose water supply is always protected from surface contamination.

Notoriously undulant fever has a tendency to chronicity with low mortality and high morbidity. Recovery from the acute phase is slow and uncertain, and those recovering are subject to recurring episodes of low grade fever or periods of partial or total fatigue disability. Entering thru the gastrointestinal tract the organisms may develop foci in the mesenteric lymph-nodes, spleen, appendix, and gall bladder or other structures of the body allowing intermittent bacterial invasion and the escape of toxins. Repeated consumption of contaminated foods (raw vegetables as well as unpasteurized dairy products) increases the opportunity for infection and allergic sensitization.

### THE CHALLENGE OF THE NEURASTHENIC

My interest in the problem was profoundly stimulated in December 1938 when a woman, age sixty-two, who for nineteen years I had treated as a neurasthenic insomniac, came to my office in an attack

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\*\*From the Medical Division, Harris Clinic.



of "hysterical aponia" intimating that she had reached the point of suicide as her only relief. For eight years I had seen her often and regularly, used all orthodox methods, a great variety of hypnotics and large doses of follicular hormone, but except for periods of remission she rarely slept more than three or four hours unless heavily drugged. I had found no maladjustment in her life. Her chief disturbing symptoms were exhaustion, nervousness, and intolerable insomnia. At intervals there had been headaches and arthritic and neuritic episodes. On a hospital regime there was little change. Our examinations were negative. Search for an explanation of the insomnia seemed hopeless. After two weeks of otherwise fruitless effort I applied malta fever studies and strange as it may seem found her skin sensitive to the brucella antigen. The blood showed a strong agglutination to B. abortus and B. melitensis. She had no fever, but complained of aggravated aching after test doses of antigen.

For two years prior to this event I had thought with increasing conviction, but controlled zeal, that many psychoneurotic, multiple-complaint, healthy looking semi-invalids in reality are sufferers from chronic brucellosis, especially those with periodic elevations of temperature. Moreover, one of my known and most obstinate cases of chronic malta fever diagnosed in September 1936 had suffered from grave insomnia, and during two of her worst "malta episodes" she too had confessed fear of suicide or that she would harm me or some of her family. I began testing other patients who had suffered varying degrees of chronic insomnia, and surprisingly enough practically all were found to be skin sensitive or have a positive agglutination test to one or more of the brucella strains. Many had been under my observation as chronic neurotics for from one to twenty years. I then sought to test all cases of neurasthenia, those whom I had never seen before as well as those who had been under my care previously. As a group they were weak, easily fatigued, tired much of the time, had little energy, headaches, palpitations, gastro-intestinal complaints, aches and pains, and were generally below par. Reference in their histories to so-called "nervous breakdowns" was frequent, and eighty per cent to ninety per cent complained of some sleep disorders. Of 149 such cases tested, sixty-six or 44.3 per cent were positive by the generally accredited criteria for the diagnosis of brucellosis. Excluding nine as having been diagnosed when first seen, the remaining fifty-seven had been observed at the Clinic at intervals over an average period of five years and eight months preceding the diagnosis of chronic brucellosis. From among the negative group I am now find-

ing definitely positive reactors by the same criteria when retested. Improved diagnostic methods undoubtedly will find still others.

We are all visited daily by patients whom we have seen so many times that we doubtless often wish they would go to some other doctor. Some of them, in fact, have been to other doctors, and, as one of my patients recently told me, they make the rounds from one to the other, completing the cycle ever so often, returning always with the same and perhaps added complaints.

Why should people who look so well complain so much? Why should they persistently fail to respond to rest, tonic activities, reassuring psychotherapy, and such measures as now constitute the orthodox regime for the treatment of chronic nerve exhaustion? Shall we still accept without challenge the belief that they are otherwise healthy individuals who have reached a state of exhaustion solely because of improper balance between food intake, rest and energy output? These should recover promptly on orthodox methods. Are we to passively agree with the psychiatrists that there is some deep rooted maladjustment, some emotional conflict, some hidden psychic something to cause it always?

May we not quite as cogently postulate the presence of some hitherto unrecognized toxin whose protean effect on the brain and nervous system may be the difference between normal and abnormal psychosomatic adjustment? Weakened in body one has no energy, no desire, no capacity for physical resistance. Weakened in mind one has no power for mental adjustment or emotional control. You and I meet many situations casually, but when they occur to one long disturbed by pain, anxiety and feelings of mental and physical exhaustion, is it any wonder they have reactions of fear, frustration, confusion, bewilderment, indecision and insecurity?

For ten years undulant fever has been recognized as a more common acute febrile ailment, and we have come to look upon it with increasing importance as a cause of protracted low grade fevers. Nowadays, no diagnostic survey of the tired, exhausted, complaining patient may be considered adequate which does not accord ranking consideration of undulant fever as a possible cause along with tuberculosis and focal infection. The absence of daily temperature elevations does not relieve one of that responsibility for there may be long intervals without fever. For this reason the misleading term "chronic undulant fever" should be discarded. More apropos is the designation, "chronic brucellosis".

Chronic brucellosis may well explain the occasional temperature elevations as well as account for the multiplicity and persistence of complaints in neuras-

thenia. The toxin undoubtedly has a special affinity for both central and peripheral nerve tissue. Much like syphilis, the period of invasion is followed by months or years of variable quiescence during which the nervous system bears the brunt of irregularly recurring infectious, toxic, or allergic episodes. Onset of the chronic state may follow a typical acute undulant fever of weeks or months duration. It may begin as short influenza-like episodes with or without respiratory tract localizations, or it may start as an acute gastro-enteritis. There are many who never seem to have an acute onset and still others whose initial invasion may have been diagnosed as slow fever, typhoid fever, rheumatic fever, malaria or dengue fever. A large number are treated for tuberculosis.

### THE SYMPTOMATOLOGY OF CHRONIC BRUCELLOSIS

Disturbed sleep, I believe, is the most common single complaint. A few have had drowsiness, but insomnia presents a serious problem. Often drowsy but unable to sleep during the day they may get one to four hours sleep after early retiring, but lie awake and restless the remainder of the night. They walk the floor and wonder. There may be adequate sleepiness without ability to reach the point of slumber, or there may be a sense of due fatigue without the faintest sleepy feeling. What sleep one may get is usually restless or disturbed by unpleasant dreams or nightmares. They waken tired and weary. One patient aptly said, "At times I'm sleepy and can't go to sleep and at others I'm really tired and can't get sleepy". Longer or shorter periods of desperately sleepless nights may alternate with similar intervals of more or less improvement, but rarely adequate sleep. The benefit of recognized treatment procedures for insomnia in them is disappointing. Regular use of hypnotics in sizable doses is essential, for the loss of sleep adds to their sense of physical inadequacy, irritability, and apprehension. Life becomes a burden.

The contemplation or fear of suicide is less common, tho in all probability a reaction to the insomnia and its associated despondency. It may occur early in the course of the disease, but is more frequent in those who for months or years have withstood its mental and physical tortures. Discouraged and despondent, misunderstood and ignored thru unrelieved years of suffering they become desperate and talk of "ending it all" or "doing something about it". As a cause of protracted ill health chronic brucellosis may be an important preventable or controllable cause of suicide. Investigation of this group of pitiables for chronic brucellosis may be enlightening.

Fatigue and exhaustion as a universal manifesta-

tion of neurasthenia is no less a characteristic of chronic brucellosis. There are those who have little reserve and tire too easily and those who are tired all the time and never feel rested. Most of them complainingly drag thru their duties at home or at work. Many are chronically incapacitated for work, except perhaps for longer or shorter intervals of symptomatic remission. They may feel well or ill without rhyme or reason. Periods of well being may terminate with discouraging abruptness. Loss of vitality and interest are coupled with a sense of helplessness and utter exhaustion. During such episodes they remain in bed, often too weak to raise a hand or speak above a whisper.

Vasomotor phenomena are common reactions. There are frequent complaints of burning, chilling, paresthesias and giddiness, and one man, a case of fifteen years standing, wakens with hot or cold waves. During the climacteric characteristic hot or cold flashes, vertigo, etc., may confuse the physician and confound his therapy. Admittedly it is most difficult properly to evaluate menopausal influences, but the one seems to aggravate and accentuate the other. Menopausal headaches, insomnia, and vasomotor disturbances may be readily dissipated by follicular hormone, but even in enormous doses it has no measurable effect on the symptoms arising from brucellosis.

The pains of the chronic brucellosis sufferer are as varied as his moods. They challenge his description and often are accompanied by sensations of drawing, cramping, tingling, numbness, stinging, burning, and various difficult-to-describe paresthesias. Soreness and tenderness are not uniformly present, and rarely in an acute exacerbation there may be redness, swelling or herpes. Neuritic, myositic, and arthritic pains fluctuate in intensity and vary as to location with rheumatic-like patterns; but except for its mild sedative effect they are little, if at all, influenced by salicylate therapy. A single joint or some particular area may more constantly exhibit pain, and there may be neuralgias of painful intensity. The ribs, neck and arms, abdomen and pelvis are among the most common pain locations. With all their pains they are long suffering. Many have been operated without satisfactory relief, and among them we find a good number to whom we may refer as "polysurgical addicts". They are slow to recover from injury. Trivial and minor accidents with no more than bruises are apt to usher in febrile cycles as well as initiate or aggravate existing aches and pains.

Their headaches may be intense, but as a rule they are nagging and described as peculiar sensations, throbbing, drawing, fullness, giddiness, etc. Usually they are occipital and nuchal, but may be supraor-



bital, frontal, unilateral or bitemporal. Rarely are they migrainous, but in one whose headache is quite effectively relieved by gynergen the brucella toxin is undoubtedly a prime factor in her so frequent and severe headaches. They become quite concerned over tinnitus, vertigo, and "strange feelings in the head".

The eyes are a source of frequent complaint. "My eyes tire and resent being used", was the remark of one patient. Many have had glasses fitted repeatedly with little or no relief. They avoid close work, reading, and the cinema because of a feeling of tension and strain, and the fear of losing the sight may add to the problem. Muscle imbalance with hyperphoria or exophoria is found with surprising frequency, and twice I have seen acute bilateral redness, edema and chemosis of the conjunctiva during recurrent exacerbations.

Gastro-intestinal complaints are numerous. Nausea, belching and regurgitation are most common. Fullness and epigastric pressure with inability to belch may cause distracting fears. They are usually well nourished and the appetite good, but often fear prevents eating properly with consequent weight loss. Marked anorexia and repulsion for food is occasionally seen. Constipation or alternate diarrhea and constipation is frequent. About twenty-five per cent of my patients have diarrhea or bowel irritability with stools that may be watery, mushy or spastic. Several have had classical subacute or chronic ulcerative colitis with bloody stools at intervals. Abdominal soreness and intermittent cramping are prevalent and occasion characteristic concern. The syndrome of chronic cholecystitis occurs with remarkable frequency, and I am constrained to believe that the gall bladder may be a regular, if not a constant, infectious focus, although in a goodly percentage the cholecystogram has been normal. In fact, the finding of a normal cholecystogram in patients with classical stories of clinical gall bladder disease is significantly suggestive of chronic brucellosis.

Irritation and discomfort of the urinary bladder with nocturia is a frequent complaint, but seldom is there a demonstrable bacilluria of any kind. Chronic posterior urethritis and trigonitis in women and prostatitis and seminal vesiculitis in men (who deny antecedent venereal infection) is the usual finding. Protracted periods of treatment do not relieve their complaints for long, and even when secondary bacilluria is completely cleared the symptoms are apt to persist or recur without bacilluria. That albuminuria is relatively infrequent, that more than an average number as a group have varying degrees of hypertension, and a few tested for kidney function have had an appreciable lowering of the phenolsul-

phonephthalein excretion may or may not be significant.

Cardiac symptoms are infrequent, but one of my most recent cases was treated as a definite myocardial insufficiency for five weeks before his persistent weakness led to the discovery of brucellosis. Pains thru the chest are common and many complain of cough and a sense of respiratory oppression. Acute febrile episodes with and without respiratory localization, usually referred to as "attacks of flu", are so frequent and followed by such profound and protracted exhaustion in known cases of brucellosis there is reason to believe many such attacks in reality are due to the brucella infection. I have once seen severe acute bronchial asthma during the course of a recurring period of fever in chronic brucellosis.

Nightsweats and excessive characteristic perspiration occur, but infrequently when there is no fever. Itching without visible rash may be very annoying; and skin eruptions with allergic characteristics have been observed, though not proven to be of brucella origin. The eruption is usually papular or infiltrative in appearance, and once I have seen shot-like nodules in the subcutaneous fat. A disagreeable vaginitis with persistent watery leukorrhea and disagreeable odor is common. No explanation for this condition is forthcoming. Brucella cultural studies have not been made. It clears up after insufflation of powders consisting of kaolin, soda and sulfanilamide.

There are four clinical types, but usually the symptoms are mixed with those of one type predominating. At one visit a patient may present complaints of one type and at the next stress another.

(1) The neuritic type in which the skeletal structures account for most of the aches and pains as arthritic, myositic or neuritic in origin;

(2) The gastro-intestinal type wherein the predominating complaints are dyspeptic or referred to or have their origin in the abdominal viscera;

(3) The exhaustion type who tire too easily, or never feel rested, or who have little energy or no reserve, as well as those with fearful weakness and incapacitating exhaustion;

(4) The anxiety depressed type who appear cheerful on the surface, but are seriously perturbed. Cases of major psychoses are reported, and I have observed one borderline schizophrenia.

## DIAGNOSIS

The opsonocytophagic reaction of itself is not diagnostic. It indicates relative phagocytic activity and may be significant as a guide in estimating the phagocytic stimulating value of any given therapeutic program. It may not be relied upon to indicate clinical recovery for complaints continue in spite of a high index, and one of my patients had been built

up to a one hundred per cent phagocytic index, but still had fever and *B. melitensis* was recovered from a perinephritic abscess drained three days later. Conversely, some who seem to reach a stage of symptomatic quiescence present lowered opsonocytophagic indices.

Infectious activity may be estimated from the degree of left shift in the Schilling differential, although many of my chronic patients fail to show any increase in stab forms. The sedimentation rate, likewise, may be of value, but it too is inconsistent. Leukopenia is the rule and a lymphocytosis of forty per cent or more is significant. A priori the presence of fever indicates active infection, but many of those chronically infected have no fever or have an elevation of 99.2 to 99.6 at infrequent and often overlooked intervals. By having the patient take his temperature three times daily for protracted periods occasional significant elevations may be recorded. Such fever elevations are of particular value if they follow a diagnostic or therapeutic injection of brucella antigen.

The present accredited criteria by which the diagnosis of chronic brucellosis is made are simple to state, but not always so easy to evaluate. Recovery of the organism from the patient's blood, his excreta or localized foci is incontrovertible, but often I accept or reject the diagnosis on immunological reactions alone with certain mental reservations. On the contrary, if proper consideration be given to the infiltrative skin reactions together with the blood serum agglutination tests, we may be fairly certain of our diagnosis as a rule even in afebrile cases.

The skin reaction is based upon the allergic response to the intradermal injection of five million to thirty million killed brucella organisms. Routinely I give eighteen million abortus-melitensis and eighteen million abortus-suis in separate arms. Only one may be positive, more frequently both. The antigen showing the strongest reaction is preferred as the one for treatment. Reactions are read in terms of redness, edema, vesicle formation and necrosis, and infiltration (shot formation). The more protracted and infiltrative the reaction, the more significant; and one that fades within forty-eight hours may be disregarded. If there is any doubt, the test should be repeated with a larger amount of antigen. About twenty-four hours after skin test doses of antigen and lasting from one to ten days positive reactors may complain of aggravation of their symptoms. Aching and soreness are especially characteristic, and not infrequently there is fever and sometimes a chill. A seventeen year old high school girl complained bitterly of the pain and soreness, and thirty hours following the intradermal injections had a chill with

fever 102 degrees F., and felt as if she were taking the flu. Seven weeks earlier her agglutination tests had been negative; but skin tests done at that time were positive and at the end of forty-nine days still showed definite bluish-red shot formation. Another patient with chronic insomnia upon whom I had done the skin test in December 1938 returned at the end of ten weeks complaining that he still had "hard lumps" in his arms. I wish to point out, however, that not all chronic brucellosis sufferers will show this classical protracted skin reaction, and I have seen it appear negative at forty-eight hours and then show definite edema and infiltration at five to ten days.

The agglutination test of the blood serum alone is less dependable than the skin test, altho the one may be positive and the other negative or vice versa. A strong agglutination in 1:80 is significant, altho one feels more secure in the diagnosis if it is positive in higher dilutions. The classical Widal technic in our hands has given best results using separate antigens of *B. abortus*, *B. melitensis* and *B. suis*. Fifty-five per cent were positive to a single organism and of these four-fifths were *B. melitensis*, twenty-six per cent agglutinated two with abortus and melitensis accounting for two-thirds of these, while five per cent agglutinated all three. An additional fourteen per cent were positive to these three and the Huddleson antigen as well. I have found mixed antigens less sensitive and the macroscopic slide test of Huddleson alone not dependable as an exclusion test. The Huddleson antigen particularly seems to exhibit quite variable degrees of sensitivity, and the positive results of a very sensitive one may closely parallel the Widal technic.

I wish to report some observations on patients showing positive skin reactions and negative agglutinations. Clinically they should have brucellosis, and, observing the skin reactions to persist, I began repeating agglutination tests in two days to two months. The increase in positives and in much higher titer led me at first to question the technic or the diagnostic value of the test. I was puzzled, but these observations were confirmed and extended to others. No doubt these patients had brucellosis. Working independently Neighbors had made the same observations which we agree are of diagnostic significance. He ran a control series on negative reactors and found in them no increase in the agglutination response. My observations corroborate his conclusions. It appears, therefore, that an intradermal injection of antigen in one sensitized to brucella organisms provokes a rapid increase in agglutinins, while in one not so sensitized there is no such increase. This simple procedure then, if it be dependable, takes on



distinct importance as a diagnostic test. At the present time my routine is to take blood and do the skin test on the same day. If the skin test is positive or doubtful and the agglutination is negative or doubtful, blood is again drawn in seven to ten days. The result of this repeat agglutination test is taken as the final evidence for or against the diagnosis. Till contrary evidence is forthcoming I propose this be used as a provocative agglutination test in the study of neurasthenic patients and others suspected of chronic brucellosis. Whether it may be of significance in acute undulant fever, I do not know.

### TREATMENT

Sufferers from chronic brucellosis as neurasthenics challenge our patience and ingenuity as therapists. They deserve considerate sympathy and more thorough study. The usual program of rest, tonic measures, physiotherapy, psychotherapy, and symptomatic relief must not be neglected. Reassuringly explain that until we know more of the disease and its eradication from the body they must make adjustment to the handicap of probable recurring symptoms from time to time. Urge that they seek the mountains during the hot summer season for they improve in a cool climate. Employ sedatives and hypnotics wisely for optimal effect. Salicylates are given with little benefit. Bromides exert a favorable influence on the nervous and emotional reactions.

Avoidance of all sources of further infection is undoubtedly of value, but perhaps more important to the success of any treatment program is the elimination of active brucella foci within the body. According to present day knowledge of the organism and its mode of invasion, our attention should be focused on the ileum, colon, appendix, liver and gall bladder as the most likely such localizations. Particular attention is directed to the gall bladder as a probable common focus lending itself to surgical removal and the opportunity for bacterial studies. When such surgery is done, further enlightenment would be desirable by removal and culture of regional or mesenteric lymph-nodes.

Treatment with immune serum has been unsatisfactory. In a case in which I used it in 1936 there followed such a prolonged exhausting febrile attack that I never again tried it. In the same patient an immune transfusion was of no benefit. Vaccines given by subcutaneous, intramuscular, intradermal and intravenous methods have been most widely used, but their effects are inconsistent. Some use large doses claiming to get best results by severe local and constitutional reactions, while others claim to use minimal or subreaction doses with better results. Non-specific protein shock has been reported to give good results in acute cases, but in the chron-

ics my observations generally are to the contrary.

The antigen of choice for treatment is that showing the greatest sensitivity as determined by the skin reaction. Given by any method, unpleasant reactions should be avoided. The minimal or subreaction dose in my hands has given best results, and it is very easy to over-dose them. After the method of Greer, I use it intravenously at first three times weekly and after three or four weeks reduce to twice and later to once a week as they may improve. The recommended initial dose should be one hundred killed organisms and subsequent doses increased by a similar increment avoiding disagreeable reactions and working for optional response. The sensitivity of every case varies, and the increase as well as the maximum dosage must be determined individually. If there is complaint about persistent unpleasant reactions in spite of small doses in the vein, resort should be made to the intradermal method. Regarding the relative merits of the two treatment usages, I have as yet reached no conclusion.

Since Welsh, et al, reported favorable effects of sulfanilamide on the opsonocytaphagic reaction in undulant fever I have used that drug in doses varying from eighty gr. daily to twenty gr. daily. It has been used alone and as a complement to the vaccine. The phagocytic response has been marked a few times and moderate much of the time, but many times a reversal has occurred. Furthermore, I find that phagocytic stimulation under sulfanilamide is seldom sustained after withdrawal of the drug. The smaller doses proved more consistently effective.

Seeking a more satisfactory medication complementary to the brucella vaccine I used colloidal sulphur hypodermatically in one case with reversal of phagocytosis. Sulpharsphenamine intramuscularly in one case gave fair response. For the past two months I have given sodium cacodylate intravenously fifteen gr. (1 gm.) to thirty gr. (2 gm.) two or three times weekly. In this I was prompted somewhat by the knowledge that for years sodium cacodylate has been more or less successfully used as a "tonic" in treating the chronic nervous invalid. So far as I know its use was purely empirical, but I have seen it occasion remarkable improvement in patients of the neurasthenic type. One of my most sensitive brucellosis patients diagnosed in March of this year reminded me that she had a long period of improvement following the taking of sodium cacodylate for three months in 1920. During the past decade, however, because of my good friends in psychiatry who have stressed the virtue of personality influence in the treatment of such cases and seeking always to improve my therapy, I allowed sodium cacodylate to fall into disuse. When I began using it in chronic

brucellosis, I was happily surprised that many reported improvement from the first dose. My insomnia patients began to sleep. I found higher and more sustained opsonocytophagic response.

Calcium cacodylate causes a similar response and may prove more effective. The dose is one and one-half gr. (0.1 gm.) or three gr. (0.2 gm.) intravenously two or three times a week. Using it in three gr. doses twice a week in my patient who was so desperate for sleep as to threaten suicide she is now sleeping an average of six hours a night without hypnotics, is no longer depressed, and appears to be at least entering a period of symptomatic remission. Others are showing similar response, and some who complained of unpleasant reactions to the sodium salt have seemed to do better after taking the calcium. The final evaluation of these two preparations is yet to be made. The cacodylate alone I believe is effective, but whether it may prove more effective as complementary therapy to the large or small doses of vaccine given subcutaneously, intramuscularly, intradermally or intravenously remains yet to be determined.

If you have patients who are unrelieved over periods of months or years and for whose continued complaints no adequate explanation has been found beyond that of the neurasthenic state, have them tested for brucellosis. I do not presume to argue that all neurasthenics have chronic brucellosis, nor is there occasion for blind disregard of the present day concept or orthodox treatment of the neurasthenic state. On the contrary, those who may prove to be positive reactors are given new hope, new courage and the will to carry on. He who is a victim of chronic brucellosis reacts badly to any worry situation and because of it his power for adjustment is lessened. Whether or not a nervous system for years affected by brucella infection or toxemia may completely recover remains to be seen.

By improved methods of study we may become better able not only to diagnose chronic brucellosis, but localize it for more effective therapeutic attack. Especially those persons having clinical suspicion of cholecystic disease should be watched for the gall bladder I believe is the most likely toxic or carrier focus. It is hoped that removal of chronic brucella foci may yet become a reality or that some definite scheme of vaccine therapy, medication complementary to the vaccine, or some chemotactic drug may yet be evolved that will be effective. The most rational plan for the public health would seem to be the prevention of further chance for infection by adequate State and Federal laws governing the sale of unpasteurized dairy products, the eradication of Bang's disease from dairy herds, and prohibiting the

use of infected fertilizer on truck and vegetable farms. But while we crusade for the protection of generations yet unborn, let us not forget the chronic brucellosis patient is now with us and what we may do for his recognition and relief is an unsolved problem of today.

## REFERENCES

1. Angle, F. E.: Treatment of Acute and Chronic Brucellosis (Undulant Fever). *J.A.M.A.*, 105:939-941, Sept. 21, 1935.
2. Angle, F. E., and Algie, W. H.: Major Psychosis in Undulant Fever. *Ann. Int. Med.*, 10:1890, June 1937.
3. Skin Testing for Brucellosis (Undulant Fever) in School Children. *Ann. Int. Med.*, 12:495, Oct. 1938.
4. Chronic Brucellosis; An Analytical Study of the Positive Reactors Among School Children. *Ann. Int. Med.*, 12:1189, Feb. 1939.
5. DeJong, Russell N.: Central Nervous System Involvement in Undulant Fever, With the Report of a Case and a Survey of the Literature. *J. of Nerv. & Ment. Dis.*, 83:430, April 1936.
6. Ervin, C. E.: Meningo-Encephalitis a Complication of Undulant Fever. *South. Med. & Surg.*, 98:478, Sept. 1936.
7. Ervin, C. E., and Hunt, H. F.: The Diagnosis and Treatment of Undulant Fever. *J.A.M.A.*, 109:1966, Dec. 11, 1937.
8. Evans, Alice C.: Studies of Chronic Brucellosis. *Pub. Health Rep.*
  - (i) Introduction. 52:1072, August 6, 1937.
  - (ii) Description of Techniques for Specific Tests. 52:1419, Oct. 8, 1937.
  - (iii) An Evaluation of the Diagnostic Laboratory Tests. 53:1507, August 26, 1938.
  - (iv) The Chronic Brucellosis Patient. *Am. J. of N.*, 39:114, Feb. 1939.
9. Gentry, Lt. Col. E. R.: Undulant Fever. Oxford Medicine, The Oxford University Press, New York City, 4:799.
10. Gershenfeld, L., and Butts, D. C. A.: A Survey of Undulant Fever and Bang's Disease in the United States. *Am. J. of Med. Sci.*, 194:678, Nov. 1937.
11. Gould, S. E., and Huddleson, I. F.: Diagnostic Methods in Undulant Fever (Brucellosis), With Results of a Survey of 8,124 Persons. *J.A.M.A.*, 109:1971, Dec. 11, 1937.
12. Greer, A. E.: The Vaccine Treatment of Chronic Arthritis by an Improved Intravenous Method. *Texas State J. of Med.*, 32:324, Sept. 1936.
13. Hammon, Louis, and Wainwright, C. W.: The Diagnosis of Obscure Fever; The Diagnosis of Long Continued Low Grade Fever. *Bull. Johns Hopkins Hosp.*, 58:109, Feb. 1936.
14. Huddleson, I. Forest: East Lansing, Michigan. Personal Communication.
15. Menninger, W. C.: Severe Mental Disturbances Associated with Organic Disease. *J. of Kan. Med. Soc.*, 37:356, Sept. 1936.
16. Neighbors, DeWitt: Ft. Worth, Texas. Personal Communication.
17. Poston, Mary A.: Studies of Chronic Brucellosis. *Pub. Health Rep.*
  - (i) Methods Used in Obtaining Cultures. 53:1, Jan. 1938.
18. Ross, T. A.: Psychoneurosis. Oxford Medicine, The Oxford University Press, New York City, 7:567.
19. Scheidegger, S., and Stern, K.: Encephalitis in Bang's Disease. *Ztschr. f. d. ges. Neurol. u. Psychiat.*, 157:449, 1937.
20. Stern, R. L., and Blake, Ken W.: Undulant Fever: Its Treatment with Sulfanilamide. *J.A.M.A.*, 110:1550, May 7, 1938.
21. Welch, H., and Wentworth, J. A.: The Use of Sulfanilamide in the Diagnosis and Treatment of Brucellosis. *J.A.M.A.*, 111:226, July 16, 1938.
22. Mettler, S. R., and Kerr, W. J.: Hepatitis and Cholecystitis in the Course of Brucella Infection. *Arch. of Int. Med.*, 54:702, Nov. 1934.

Note: The case reports included in the original article have been omitted because of lack of space.

Tuberculosis Among College Students—During 1937-1938 over 64,000 students were given tuberculin tests with 25.8 per cent showing positive reactions. Since 1932-33 when the first figures were collected there has been a steady increase in the number of tests and a slow but steady fall in the percentage of reactors. "The value of the tuberculosis program to the individual student, whether he be the patient or the protected, is incalculable," reports the Committee. "The effort of finding tuberculosis is justified by the educational value alone. It is a demonstration of how lives can be saved and the community safeguarded. This is hygiene that actually operates." *Ann'l. Rep. Tuber. Comm. of Amer. Student Health Assn.*, 1937-1938.



## URINARY TRACT INFECTIONS AND THEIR MANAGEMENT

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Methods of investigation of patients with urinary infection combined with accurately applied chemical and urological therapy have reached a degree of standardization that is approved by acceptable urological authority. This study is an attempt to briefly outline the steps found most valuable in managing these problems. A knowledge of possible types of urinary infection, routine methods of investigation, interpretation of bacterial as well as standard urinalysis, and the correct use of chemical or surgical therapy are pre-requisites to intelligent management. The following remarks analyze these factors but do not include tuberculosis or gonorrhea.

Urinary infections are spoken of as renal (including pelvic and ureteral), vesical, and urethral types. In addition, adnexal disease may accompany or initiate any of these. Renal infections are usually referred to as hematogenous when infections reach the kidney by way of the blood stream, or urogenous when by way of the urinary or genital tract which results in involvement of the ureter-pelvic-renal structures by direct ascension of the ureteral lumen or periureteral lymphatics. (See Figure I.)

The Hematogenous infections are usually considered as *focal coccal nephritis* which occurs as renal carbuncle or multiple abscesses, caused by staphylococcus in which the renal cortex alone is usually involved while the urine itself may show no abnormalities, and *focal pyelonephritis* which usually has no urogenital abnormality as an accessory. It is often seen in its acute form accompanying or following influenza, salpingitis, osteomyelitis and generalized infections, is rarely serious, and the urine usually shows pus and blood cells. This may fade into chronic focal pyelonephritis with urinary findings on one examination that show only rare pus and blood cells and on another examination huge quantities of each, including bacteria. In the early part of the disease *B. Coli* predominates, and if the disease progresses untreated, secondary invaders of *B. Aerogenes*, *B. Proteus* and cocci are found, and the diagnosis is indistinguishable from chronic pyelonephritis of the Urogenous type and may show calculi, caliectasis, and pyelectasis.

Of the Urogenous group there are *obstructive*,

*urethral* and *dynamic* factors causing renal infection. Urinary obstruction is ever to be in mind when analyzing symptomatology accompanied by pyuria because nephritis, pyelonephritis, pyelitis, perinephritis, and pyonephrosis may follow any type of interference with the transportation of urine. Unless stasis is corrected, varying degrees of dilation or stenosis, mild to total renal obstruction, and calculus may follow, always due to the activity of bacteria in the area of stasis. Infants and children may have any of these findings (See Figure 2), but in over ninety per cent of all chronic pyurias of childhood, congenital anomalies have been found responsible, according to Levine. Pregnancy is frequently an obstructive factor, due possibly to uterine impingement or hypotomy of the ureter due to influence of pregnancy hormone substances in the blood<sup>8,30</sup>. In the male the prostate must be analyzed as a factor, because a chronic prostatitis may keep active an upper urinary infection, by regurgitation into the bladder of its infected secretion. In hypertrophy, the mechanical obstruction may initiate and keep active a pyelonephritis. "Infected hydronephrosis may or may not be a serious disease, depending upon the site of obstruction, the damage already present, the possibilities of recovery by correction of stasis and infection, and the state of the opposite kidney"<sup>3</sup>. (See Figure 3).

Upper urinary infections secondary to urethritis are infrequent except in children, older girls and women. Any type of instrumentation of the urethra, bladder or ureters may induce a renal infection or activate a quiescent focus, although such sequelae are infrequent. In women renal infections are occasionally seen accompanying trigonitis induced by sexual intercourse. I have seen spontaneous ascension in girl babies from diapers by fecal soiling of the urethral meatus, and in older females from leukorrhea and endocervicitis.

Upper urinary infections may follow pelvic inflammatory disease in women that has induced a periureteritis and lymphatic involvement that interferes with dynamics of peristalsis. The stasis resulting therefrom permits bacterial accumulation with acute and chronic changes<sup>24</sup>. Similar findings may occur in neurogenic disturbance of the ureter. Therapeutic results for the urinary tract avail little unless these causative factors are also eliminated. Occasionally there are seen troublesome infections of the upper urinary tract following surgery of the large bowel, especially for the resection of malignancies<sup>3</sup>. The cause is the acute temporary urinary retention following interruption of the bladder innervation. The cystitis that results from the over distention of the bladder and catheterizations, occasionally ascends.

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## TYPES of UPPER URINARY INFECTION —

### HEMATOGENOUS

Enters by way of blood - Infections remain essentially within kidney

#### FOCAL COCCAL

STAPHYLOCOCCUS ~ CORTICAL ABSCESS  
CARBUNCLE ~ USUALLY UNILATERAL ~ URINE USUALLY NORMAL.

#### FOCAL PYELONEPHRITIS

ACUTE, ACCOMPANIES OR FOLLOWS INFLUENZA, SALPINGITIS, OSTEO-MYELITIS AND ACUTE INFECTIONS. URINE MAY SHOW PUS AND RED CELLS WITH OR WITHOUT BACTERIA. NOT SERIOUS IF TREATED PROPERLY

CHRONIC, DEVELOPS FROM POORLY MANAGED ACUTE TYPE. URINE SHOWS PUS, RED CELLS, BACTERIA.

### UROGENOUS

Begin in urethra or adnexa ~ Reach kidney thru ureteral lumen or periureteral lymphatics

**OBSTRUCTIVE** ~ Produces NEPHRITIS, PYELITIS, PERINEPHRITIS, PYELONEPHRITIS, CALIECTASIS ETC.

1. INFECTION AND OBSTRUCTIVE EDEMA
2. OBSTRUCTIONS OF INFANCY AND CHILDHOOD
3. OBSTRUCTIONS OF PREGNANCY
4. FOLLOWING PROSTATITIS AND PROSTATISM
5. INFECTED HYDRONEPHROSIS

#### URETHRAL

1. SECONDARY TO URETHRITIS, INSTRUMENTATION, COHABITATION.
2. SPONTANEOUS ASCENSION OF INFECTION

**DYNAMIC** ~ Functional stasis

1. FROM PELVIC INFLAMMATORY DISEASE
2. FOLLOWING SURGERY OF THE BOWEL
3. NEUROGENIC

### END RESULTS of CHRONIC INFECTION

#### BOTH TYPES

CALIECTASIS  
PYELECTASIS  
URETERECTASIS

PYELONEPHRITIS  
PYELONEPHROSIS  
VARYING DEGREES of RENAL DESTRUCTION

HYDROURETER  
STONE FORMATION

Fig 1

Much of this can be prevented by administration of sulfanilimide before and for several days following the bowel surgery, and the insertion of an in-dwelling catheter for forty-eight hours postoperatively.

The acute infections of the urogenous group are seldom serious, and represent the optimal time for treatment. Chronic pyelonephritis on the other hand is one of the most serious problems in medicine, and results in increasing degrees of renal-ureteral damage, caliectasis, pyelectasis, calculus, ureterectasis, with some instances of serious curtailment of glomerular activity, and, unfortunately is frequently bilateral, (Figure 4).

Infections of the bladder are usually secondary to renal or urethral infections, with chronic changes persisting if the infection goes untreated. The causes within itself that may incite infection are calculus, foreign bodies, malignant growths, neurogenic disturbances, and obstructions with over distention. Treatment is correctly planned with these facts in mind.

Infections of the urethra aside from gonorrhea, are infrequent and usually mean the presence of a stricture, acute or chronic prostatitis, calculus, new

growth, and occasionally a mixed or non-specific urethritis which is composed of saprophytes with secondary surface invading bacteria. In rare instances trichomona may be found and the chronic focus will usually be the prostate or reinfection from the sexual partner. About the only focal infection that settles in the prostate is dental. A careful examination and treatment of involved teeth is essential in treating chronic prostatitis that is nonvenereal. Recent experience in endocrine therapy also indicates that a nonbacterial pus can be found in prostatic secretion, where large doses of androgenic or estrogenic hormones have been administered. The pus cells disappeared upon cessation of endocrine treatment.

The first step in management is a detailed history, especially directed to uncover previous urinary infection from birth to the present time. Woodruff et al<sup>30</sup> have rather convincingly shown that pyelonephritis of pregnancy occurs only when there has been infection previous to gestation. The physiological changes in the urinary tract accompanying pregnancy become pathological only on the basis of pregestational urinary pathology—usually of obstructive type. Important also is the questioning directed to



old adnexal disease, and endocervicitis in women as demonstrated by H.P. Winsbury-White<sup>30</sup>.

The general examination needs to be inclusive and thorough before focusing attention on the pyuria. The best aid to classical urinalysis is simple gram stain of dried sediments, plus cultures of catheterized urines from women, and freshly voided from men. In addition, classical renal function tests, plain x-rays, intravenous pyelograms, cystograms, and urethral sounding may be indicated.

These steps cannot be expected to supplant a careful urological investigation with retrograde urogram. By these means alone can the finer diagnoses of uropathies be made.

All patients with chronic infection and those with acute that do not have consistently sterile urine cultures after three to four weeks of medical management, are entitled to the benefit of a competent and complete urological investigation.

Urine bacteriology is essential because upon the basis of the type of invading individual or mixed bacteria, accurate treatment and prognosis can be given. For practical purposes simple gram stains of dried sediments are sufficient. For specific purposes, usually of renal infection alone, cultures are necessary. The following gives some idea of the bacteria usually encountered, their main characteristics, and response to chemotherapy.

## BACILLI

(Gram Negative)

Escherichia (B. Coli)	B. Aerobacter Aerogenes	All Forms B. Proteus
Surface bacilli, rarely penetrate mucosa. Does not produce gross tissue damage.	Invasive tissue, erodes mucosa. Produces gross tissue deformity, poor renal function, occasionally tissue necrosis and stone formation.	Dangerous infection. B. Proteus splits urea, causes alkaline urine, induces stone formation, is hard to eliminate, and may directly invade tissue to cause purulent necrosis.
Occurs seventy per cent acute, fifty-five per cent chronic infections.	Occurs fifteen to twenty per cent acute and thirteen per cent chronic infections.	Occurs three to five per cent chronic infections.
Occurs in urine of pH six to seven when alone.	Occurs in urine of normal pH.	Occurs in urine of pH seven and above.
Easily destroyed and responds well to either sulfanilamide or mandelic acid when alone; but best to sulfanilamide when accompanying chronic infections with other bacteria.	Moderately resistant to treatment. Responds well in acute infections to either sulfanilamide or mandelic acid, but in chronic infections responds best to sulfanilamide.	Extremely difficult to treat, usually demands surgical or mechanical treatment. Sulfanilamide occasionally destroys it and is only drug so far known that is effective against B. Proteus.

Two bacilli, Salmonella and Shiga, are also gram negative and occasionally seen in urinary infections. They are of importance because they produce alkaline urines and occasionally induce stone formation. They usually respond well to sulfanilamide.

## COCCI

(Gram Positive)

(Our experience has paralleled that of other observers in that we have recovered cocci from cultures of upper urinary infections of chronic type in twelve of fifty-one cases cultured, (23.5 per cent). Braasch reported twenty-eight per cent<sup>2</sup>. In the acute focal suppurative renal infections we have always found cocci alone or as part of a mixed infection).

### STREPTOCOCCI

S. Fecalis  
Characteristics similar to B. Coli. A surface infection. If untreated it may persist to invite secondary invaders. Has been known to induce pyuria and pyelonephritis when hemogenous.

Other Types  
Rather rare, and usually seen as mixed infection.

### STAPHYLOCOCCI

The S. Albus is sometimes seen in chronic, but the S. Aureus is the commonest in acute and chronic infections. Usually found as secondary invaders, except in the acute focal renal lesions of abscess and carbuncle formation. Sometimes confused with the micrococci, and best differentiated in mass forming Gram positive cocci of urine sediments by using Thompson's technique<sup>12,29</sup>. They can induce tissue necrosis and stone formation.

Occurs in two per cent acute or chronic infections.

Rare.

Occurs eighteen-twenty-five per cent chronic, but the S. Aureus present in almost 100 per cent acute abscesses and renal carbuncles.

Occurs in urines of normal pH.

Occurs in urines of normal pH.

Occurs in urines of normal pH and above.

Seems to specifically respond to mandelic acid therapy only.

Sulfanilamide is usually quite effective against this type.

May or may not respond to Sulfanilamide, but quite often are destroyed by intravenous neosalvarsan. The acute fulminating infections are surgical emergencies.

Chronic pyelonephritis in our experience has shown abacterial pyuria in twenty per cent of patients, and mixed type of bacterial infection in twelve per cent. In bladder and urethral infections, mixed bacteria are common, with B. Coli predominating in the bladder, and cocci in the urethral type. In any of the types, there may be one or more of the rarer bacteria, pseudomona or alkaligenes, which are important because of their ability to split urea and induce stone formation. They respond well to sulfanilamide. Occasionally, saprophytic invaders are found to persist in spite of disappearance of the original predominating bacteria. Neosphenamine intravenously and retrograde use of one to three per cent silver nitrate have been our best therapeutic aids in such cases.

Good treatment requires fulfillment of the following fundamentals:

1. Urinary stasis should be removed, whether from obstructive uropathy, or dynamic changes.
2. Adnexal foci, and foci that infect the pros-

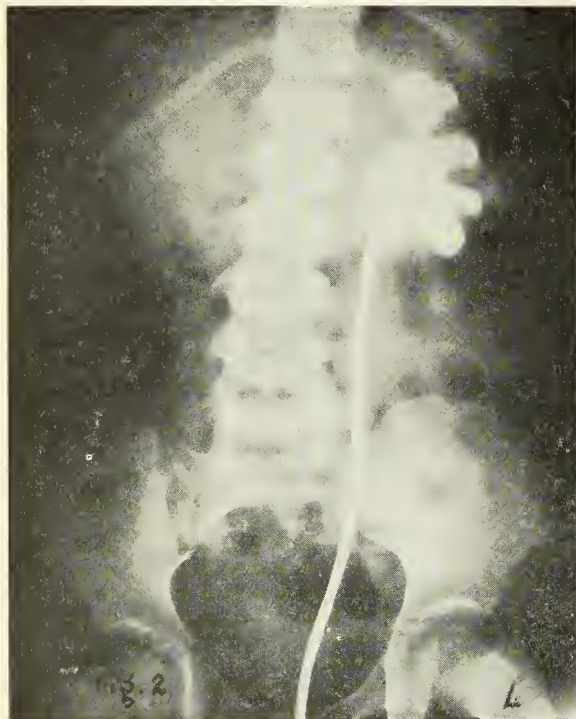


Fig. 2. D. M. Female, age 7 years. Chronic left pyelonephritis with pyelectasis, *B. Coli* and *B. Aerogenes* infection. Due to congenital stenosis left ureteral lumen-lower segment.

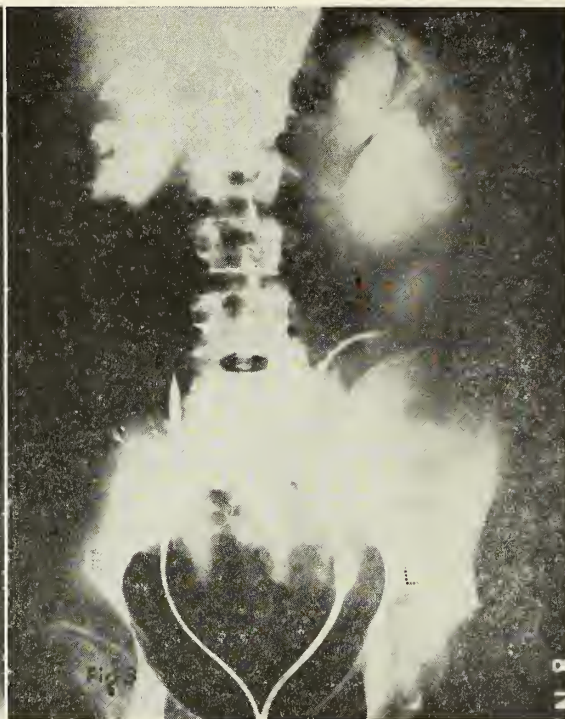


Fig. 3. A. T. Male, 45 years. Bilateral hydronephrosis, functionless left kidney, due to occlusion uretero-pelvic junction by chronic periureteritis. Symptoms fifteen years, very poorly managed by many doctors, who treated for "pus in urine."

tate, must be removed.

3. The urine bacterial flora should be identified.

4. The kidney must be able to excrete the drug prescribed.

Acute staphylococcal renal infections are frequently surgical, and may require an emergency nephrectomy or drainage. Fortunately, they are usually unilateral. Surgery is indicated elsewhere to remove stones that are obstructing or causing tissue change, obstructing prostatic hypertrophy, tumors and foreign bodies of the bladder, adhesive bands and anomalous blood vessels outside the urinary tract, adnexal pathology in the female, plastic uretero-pelvic procedures to decrease pelvic stasis, and probably most often as nephrostomy, to put at rest a weak kidney so it may overcome its infection and return to increased function the sooner. We have done nephrostomy in twenty-three per cent, and Braasch reports seventeen per cent in his experience with chronic pyelonephritis. Cystoscopic manipulations are indicated to obliterate stricture of the urethra and orificial stenoses of the ureters, to induce recovery in adynamic periureteritis thus overcoming stasis which is often localized in the upper or lower ureter without evidence of back pressure, (See Figure 5); to extract smaller and unimpacted calculi in the

lower ureter and to do pelvic lavage in the case of small stones in the kidney pelvis, as many of these stones do not require removal<sup>2</sup>. In each of the above procedures, involving the upper urinary tract, correct chemotherapy is also administered.

Experience has so overwhelmingly accumulated in the past two years to demonstrate the immense superiority of modern chemotherapy, that one may safely discard his previous ideas of the old urinary antiseptics in favor of the new. Schohl and Janney<sup>25</sup> established the first scientific approach to the problem of correct chemotherapy of urinary infection, by studies of hydrogen ion concentration of urine in relation to bacterial growth. Helmholtz and Clark demonstrated that strong acidification of the urine by ketosis produced bacterio-stasis, and initiated the systematic search for an acid that would be bactericidal and excreted in satisfactory concentration by the kidneys. Rosenheim<sup>23,24</sup> re-discovered and introduced mandelic acid with subsequent clinical and laboratory experience demonstrating its value, but also its many limitations. Shortly after Domagk introduced Prontosil into the treatment of streptococcal infections, Temming<sup>18</sup> described its use as a urinary bactericidal drug and, all observers noted that sulfanilamide was excreted by the kidneys and demonstrated urinary bacteriostasis. These two drugs are





Fig. 4. G. W. Female, 32 years. Chronic bilateral pyelonephritis with caliectasis, pyelectasis and ureterectasis. Symptoms intermittent pain, frequency and pyuria. No urological consultation until five years after onset.

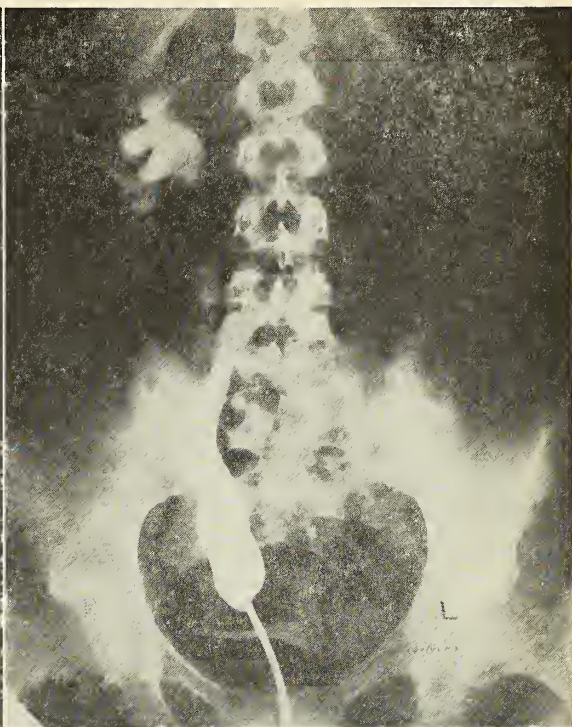


Fig. 5. T. S. Female, 28 years. Right localised ureterectasis lower half, with only moderate upper urinary changes. Due to stricture ureterovesical orifice. Acute onset six months previous, not diagnosed by intravenous pyelogram because it failed to fill ureter. Above urogram made at first urological consultation. B. *Aerogenes* infection, plus *staphylococcus*.

the most satisfactory urinary antiseptic available for oral therapy at the present time.

Mandelic acid, a simple aromatic hydroxy acid ( $\text{C}_6\text{H}_5\text{CHOH-COOH}$ ) is excreted entirely through the urine unchanged, and may be prescribed as syrup or elixer, either plain or as ammonium mandelate. Schonor<sup>26</sup> introduced calcium mandelate which is the most palatable of all forms and is available in tablets of 0.5 gm. Various studies indicate mandelic acid is efficient against most of the bacteria occurring in urine but especially for *B. Coli* and *Aerogenes*, while it is specific against *streptococcus fecalis*. It works best in acute infections and less satisfactorily in chronic<sup>4,7,17,18</sup>. Its only contra-indication is renal damage. Therefore, in acute nephritis and renal impairment it is useless because injured kidneys cannot excrete acid urine. It seems to fail where there is stasis, calculus, chronic infection, in the presence of *B. Proteus*, and *staphylococci*. Urine acidification can be determined by using any method for pH determination. A simple laboratory procedure is to use nitrazine paper and compare it to a scale of color changes, or use methyl red which turns pink at pH 5.3 and yellow to orange when pH 7 is approached. Dosage is universally accepted as that which will produce a urine concentration of 0.5 per

cent to 1.0 per cent at pH 5.5 or less, and for the average adult on 2000 cc a day of fluid intake, requires twelve grams of mandelic acid per day. Children are given one-half to two-thirds the adult dosages. The drug can be given for many weeks without injury, but when blood cells or casts appear in the urine it should be discontinued for seven to ten days and may be readministered with caution. If these conditions of dosage are not adhered to, success is unlikely. The additional administration of forty to sixty grains of ammonium chloride or ammonium acid phosphate may be necessary to reduce the pH to 5.5.

Sulfanilamide has been termed,—“one of the most potent and practical urinary antiseptics that has been introduced”<sup>28</sup> and is bactericidal to some degree against all bacteria found in the urine, except *streptococcus fecalis*. Like other bactericidal agents, it follows general conclusions applied to such drugs: The action varies inversely with the number of organisms, and directly with the concentration of the drug. It is more satisfactory in children and young adults where it shows almost no toxicity, and less suited to old people. Sulfanilamide so far in our experience, has been the best absorbed form, and superior to sulfanyl sulfanilamide, and sodium sul-



fanyl sulfanilamide both in absorption and therapeutic results. However, some patients not tolerating it well, have been able to take neoprontosil satisfactory, with equally good clinical results. Sulfapyridine although efficient in gonorrhea, has demonstrated no superiority to sulfanilamide in urinary infections sufficient to justify the great and increased expense in its use. Sulfanilamide has the advantage of being bactericidal in urine of any pH and is useful in acute renal damage where the only urine excreted is alkaline and for the same reason is especially useful in *B. Proteus* infections that produce highly alkaline urines by urea splitting action. It has been recovered from many body fluids, and is the only chemotherapeutic agent recovered in bacteriostatic quantity from prostatic secretion. The toxic reactions of sulfanilamide therapy are well known and should be looked for and patients instructed as to their character with advice to discontinue the drug when they appear, until further medical advice. If discontinued at the first sign of toxicity, reactions are mild, and the drug may in some patients at a later date, be readministered with little or no toxicity. In the presence of toxic manifestations, the drug may be rapidly eliminated in eight to twelve hours by the forced ingestion of large quantities, 3000 to 5000cc, of water<sup>21</sup>. I usually do hemaglobin determinations on all patients twice weekly during treatment and discontinue the drug upon any decrease from the original reading.

On tissues recently operated, sulfanilamide apparently has little or no bactericidal effect. Our experience has been it did not minimize the postoperative infections in any of seventeen renal operations nor forty-two prostatic resections studied with this in mind. This somewhat parallels the experience of Gaudin et al<sup>10</sup>. *B. Proteus* infections may or may not respond to it. Personal experience has been discouraging, but Braasch and others report control of such infections with sulfanilamide as satisfactory. In our experience, of four *B. Proteus* infections, two of the upper tract and two of the bladder, the latter both died of gradual tissue neurosis, and the renal cases still show positive culture, even after removal of stones and six months of persistent chemotherapy. However, the bacterial concentration is less than before treatment. It is efficient in both acute and chronic infections with results superior to mandelic acid in chronic but about equal in acute gram negative bacillary infections. Vest<sup>28</sup> reported only fourteen per cent sterile urines in cystitis accompanied by stone, diverticulae and large residuals. In cystitis without complications, eighty per cent became sterile using sulfanilamide. In nonoperative prostatitis forty-five per cent resulted in sterile culture, but in

pre and postoperative prostatic surgery, urines did not become sterile in sufficient degree to warrant its routine use. However, if it was administered thirty or more days following surgery the urines became sterile in sixty per cent showing single cultures, but only thirty-seven per cent with mixed infections.

Dosage of sulfanilamide is still not standardized. Helmholz<sup>13</sup> originally determined that an urine concentration of 100-200 mg per cent was satisfactorily bactericidal and was produced by forty to fifty grains in-take per twenty-four hours in a patient of 150 pounds. Clinically, this has proved very satisfactory and has been our method of dosage, in addition we administer an equal quantity of soda bicarbonate. Fluid intake should be held to 2500 to 3000cc. Within three to four hours after taking by mouth, the blood level of sulfanilamide reaches its height and drops rapidly, to rise after the next dose<sup>1</sup>. This explains the great variation in results from blood determinations as usually requested. A twenty-four hour urine determination is more reliable as a therapeutic index. However, a blood level should be determined a few times in the early treatment of any case with probable renal insufficiency, because impaired kidneys may not excrete the drug and toxic levels will accumulate. Two to five mg. per cent have usually been found in blood levels of normal individuals, depending on how long after ingestion of the drug the test was made. In unilateral kidney disease, the drug is excreted in direct relation to the phthalin output. Children tolerate the drug well, and infants have been given up to fifty grains in twenty-four hours with no ill effects<sup>27</sup>. The blood level is highest two hours after taking, and toxic reactions are rare. The drug acts the same as in adults—except seventy-five per cent of cases developed sterile urines, somewhat higher than in adults. Helmholz<sup>18</sup> advocates a dosage for children of ten grains per twenty pounds of body weight with an equal amount of soda bicarbonate, as producing a concentration of fifty mg. per one hundred cc of urine on normal fluid intake, which is satisfactorily bactericidal.

For some coccal infections that do not yield to either of the drugs mentioned, we should follow the advice given twenty years ago by Gross<sup>11</sup>, and administer a few doses of intravenous neosarsphenamine. The results are often encouraging. It has been of special value to us in resistant staphylococcal, and saprophytic infections of mixed type.

#### SUMMARY

Good management of urinary infections requires first, an analysis of the patient; second, a knowledge of possible types of infection; third, an appreciation of urinary bacteriology and the flora in each patient; fourth, determination whether or not the patient is



a medical or surgical urological problem; and finally, application of specific chemotherapy or mechanical treatment as indicated.

### CONCLUSIONS

1. Analysis of obstructive factors must include those interfering with the dynamics of urine excretion.

2. Adnexal infections, unless removed, may keep the urinary tract infections active.

3. Gram stains of urine sediments are practical as a guide to therapy and prognosis.

4. Sulfanilamide, calcium mandelate, and neosalvarsan are the best specific chemotherapeutic agents in urinary infections.

5. Mandelic acid products to be used only in undamaged kidneys that can excrete acid urine.

6. All acute patients who do not develop sterile urines within three to four weeks of treatment, and all chronic infections, should have complete urological studies.

7. All types of uropathy must be removed before the urinary antiseptics can be expected to be useful.

### BIBLIOGRAPHY

1. Alyea, E. P., Daniel, W. E., Yates, Anne—Sulfanilamide and Disulfanilamide Concentrations in the Blood. *J. Urol.* 41, 14-30, 1939.
2. Braasch, Wm. F.—Clinical Data Concerning Chronic Pyelonephritis. *J. Urol.* 39, 1-26; 1938.
3. Braasch, Wm. F.—Pyelonephritis and Its Treatment. *Surg. Gyn. & Obstet.* 68:534-539, 1939.
4. Carroll, G. Kappel, L. & Lewis, B.—Mandelic Acid, Therapeutic Value and Limitations. *Amer. J. Surg.* 42:365-67, 1938.
5. Crenshaw, J. L., and Cook, Edw. N.—Limitations, Dangers and Failures in Treatment of Urinary Tract Infections. *J. Urol.* 41: 64-68, 1939.
6. Cook, E. N.—Chemotherapy of Urinary Infections. *J. Urol.* 39: 692-698, 1939.
7. Cook, E. N. & Braasch, Wm. F.—Chemotherapy of Urinary Infections. *Med. Cl. No. Amer.* 22:1177-1180, 1939.
8. Eastman, N. J.—Review of Pyelitis of Pregnancy. *Internat'l Clin.* 5:234-306, 1938.
9. Ezickson, W. J.—Sulfanilamide—Value in Treating Infections of Bladder and Upper Urinary Tract. *Ann. Int. Med.* 12:244-48, 1938.
10. Gaudin, H. J., Zide, H. A. & Thompson, G. J.—Sulfanilamide, Its Use After Prostatectomy. *J. Amer. Med. Assoc.* 110: 1887-90, Jan. 4, 1938.
11. Gross, S.—Management of Cysto-Pyelitis. *Wiener Klin. Wchnschr.* 30:1381-84, 1917.
12. Goldstein, Moe—Pathogenicity of Cocci from Urine. *J. Urol.* 41:237-251, 1939.
13. Helmholz, H. F.—Bactericidal Power of Urine After Proctylin. *Proc. Staff Mayo Clin.* 12:244-46, Apr. 21, 1937.
14. Helmholz, H. F., & Osterberg, A. E.—Rate of Excretion of Sulfanilamide and Bactericidal Power in Urine. *Proc. Staff Mayo Clin.* 12:377-80, Jan. 16, 1937.
15. Helmholz, H. F.—Sulfanilamide as a Urinary Antiseptic. *J. Ped.* 11:243-247, 1937.
16. Helmholz, H. F.—Comparison of Mandelic Acid and Sulfanilamide as Urinary Antiseptic. *J. Amer. Med. Assoc.* 109:1039-1041, Sept. 25, '37.
17. Helmholz, H. F.—Infections of Urinary Passages. *Amer. J. Surg.* 38:18-28, 1937.
18. Helmholz, H. F., Urinary Infections in Infancy and Childhood. *J. Amer. Med. Assoc.* 111:1721-1723, Nov. 5, '38.
19. Levine, S. Z., in discussion of Genito Urinary Infections. *J. Amer. Med. Assoc.* 112; p. 1589, Apr. 22, '39.
20. Maraun, L., (Quotes Temming)—On the Administration of Proctosil. *Praxis* 7:304-307, Jul. 1936.
21. Marshall, E. K. Jr.—Pharmacology of Sulfanilamide. *J. Urol.* 41:8-13, 1939.
22. Randall, A. & Hughes, Bolland—Therapeutic Management of Urinary Infections. *Annals Surg.* 108:903-909, 1938.
23. Rosenheim, M.L., Mandelic Acid in Treatment of Urinary Infections. *Lancet*, 1:1032-1037, 1935 (May 4).
24. Rosenheim, M. L.—Mandelic Acid in Treatment of Urinary Infections. *New Internat'l Clin.* 2:43-53, Jan. '38.
25. Schohl, A. J., Janney, T.—Growth of Bacteria in Urines of Varying Hydrogen Ion Concentration. *J. Urol.* 1:211-229, 1917.
26. Schonor, Edgar—Treatment of Urinary Infections with Calcium Mandelate. *Lancet* 1:1004-1006, May 8, '37.
27. Summerfel, Pearl, & Mitchell, D. T. & D. R.—Treatment

of Urinary Infections in Children with Sulfanilamide. *J. Urol.* 41: 59-64, 1939.

28. Vest, S. J., Hill, J. H., & Colston, J. A. C.—Experimental Clinical Observations on Sulfanilamide in Urinary Infections. *J. Urol.* 41:31-34, 1939.

29. Thompson, Luther—Morphological and Cultural Study of Staphylococci with Special Reference to Source. *Amer. J. Clin. Path.* 2:125-134, 1932.

30. Woodruff, Stanley R., & Milbert, A. H.—Roentgenographic Studies of the Urinary Tract During and After Pregnancy. *J. Amer. Med. Assoc.* 111:1607-1611, Oct. 29, '38.

31. Winsbury-White, H. P.—The Influence of Infections of the Lower Urinary Tract and Reproductive Organs on the Kidney; with Special Reference to Lithiasis and Hydronephrosis. *J. Urol.* 36: 469-490, 1936.

## USE OF BARBITURATES IN SURGERY III\*

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Cases have been described in previous papers\*\* in which oral administration of barbiturates facilitated various procedures, permitting some to be undertaken with local anesthesia and some with none at all. With continued experience the field for this method has widened. An additional group of representative cases is reported.

### CASE 1

A boy, aged thirteen, pulled the trigger of his air rifle while his left index finger covered the muzzle. The shot was imbedded in the pulp of the terminal phalanx. He was given a capsule of pentobarbital sodium (nembutal), 1½ grains. Thirty minutes later, a hypodermic needle was inserted into this tender area and solution of one per cent procaine hydrochloride infiltrated. The pellet was removed without pain.

### CASE 2

A male infant, aged four weeks, had the typical symptoms and signs of congenital hypertrophic pyloric stenosis. The powder in one capsule of seconal (sodium propyl-methyl-carbinyl allyl barbiturate), 1½ grains, was dissolved in twenty cc. of water. One-fourth of this volume was instilled into the infant's rectum through a soft rubber catheter. After thirty minutes, a Rammstedt operation was easily performed, using five cc. of a solution of one-half per cent procaine hydrochloride in the line of incision.

### CASE 3

A boy, aged ten, had ingrown nails on each great toe. Operations to correct these conditions were done

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\*\*Walker, M. A., and others: Use of barbiturates in surgery, *J. Kansas M. Soc.* 38:382 (Sept.) 1937; 39:383 and 408 (Sept.) 1938.

using local anesthesia, one hour after administration of a capsule of seconal by mouth.

#### CASE 4

A girl, aged eighteen, had two adenofibromas in the left breast, one behind the nipple and the other in the upper outer quadrant. A capsule of seconal was given by mouth. Forty-five minutes later, solution of one-half per cent procaine hydrochloride was infiltrated under the tumors, which were then removed through a radial incision. The patient slept during the operation.

#### CASE 5

A woman, aged eighty-four, stepped into a ditch and fractured her calcaneus, at about ten p. m. One capsule of pentobarbital sodium was administered, the foot was elevated on pillows, and she slept peacefully through the night. On the following morning, another capsule was given and she was taken to the hospital. A roentgenogram showed the fracture without displacement. A plaster of paris cast was applied and she returned to her home. Two days later when attempting to walk she slipped and fell, fracturing both bones at the lower end of the left forearm. A capsule of pentobarbital sodium was given. She was taken to the hospital, where a roentgenogram showed a typical Colles' fracture. Solution of two per cent procaine hydrochloride was injected into the hematoma at the site of each fracture. The fragments could then be manipulated without pain, the deformity completely reduced, and a plaster of paris splint applied.

#### CASE 6

A woman, aged seventy-six, placed a box on a chair and climbed on this pedestal to hang some curtains. When she fell, a typical Colles' fracture occurred at both wrists. A capsule of seconal was administered. She was transported to the hospital in a car, supporting both forearms on a soft pillow. Roentgenograms were taken. Solution of two per cent procaine hydrochloride was injected into the hematomas at the site of each fracture. Both wrists could then be freely manipulated without pain. The fractures were reduced using the fluoroscope. Plaster of paris splints were applied. She was able to return to her home immediately thereafter.

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Self-Protected—Few physicians die of tuberculosis despite the fact that they are constantly exposed to it. Knowledge defends them as it may yet defend other groups in the population when properly educated in self-protection.

Early discovery of infection is a game of wits. The tubercle is relentless but without wit. The human race has wit but is indolent. Add to our wit a touch of the relentlessness of our enemy and he has no chance of survival. Emerson, K., *Jour.-Lancet*, 1939, 59.

## PNEUMONIA IN CHILDHOOD\*

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Most of us find considerable difficulty in deciding whether the child under our care has pneumonia, bronchitis or a bad cold. As acute upper respiratory diseases are our heaviest contributors during this season, it is economically as well as scientifically practical to discuss the more serious conditions which may occur.

Childhood pneumonias are generally classified as follows:

1. Bronchopneumonia or lobular pneumonia.
2. Lobar pneumonia or croupous pneumonia.
3. Chronic interstitial pneumonia.
4. Hypostatic pneumonia.

This discussion will be limited to lobar and bronchial pneumonia.

Lobar pneumonia is more common than bronchopneumonia in the first two years of life. Boys seem to be more susceptible than girls. It frequently follows colds, exposure, la grippe, chest trauma and general anaesthetics. In 1,146 cases of la grippe in children, Aldrich found nineteen cases of pneumonia.

Pathologically this condition is similar to the adult type, except many times children have only a portion of the lung involved and not the whole lung. The exudate in the alveolar sacs is less profuse.

Cowherd<sup>1</sup> believes some cases of typical lobar pneumonia, clinically, never pass the congestive stage in their development. Frequent and severe pleurisy is a peculiarity of the childhood lesion; otherwise, the usual congestion, red hepatization, gray hepatization and resolution is found.

According to Holt<sup>2</sup> the portions of the lung involved, in order of frequency, are as follows:

First—left base, second—right apex, third—right base, and fourth—left apex. In five to ten per cent of the cases both lungs are involved.

The onset is usually sudden, with vomiting, diarrhea and a sudden rise in temperature. The face becomes flushed, with severe headache and marked prostration. Cough may or may not be present. Occasionally there will be a severe pleurisy, the pain may be referred to the right lower abdomen and be confused with acute appendicitis. Vomiting is by far the most common symptom of the onset. Differing from the adult type of infection, no rigor is noted. Marked pallor or coldness may usher the disease. The respiration may be forty to eighty per minute with retraction on intercostal spaces on inspiration, and on expiration there is often a moan or



grunt. A pulse rate of 140 to 180 is quite common in infants and young children, and this should not be cause for worry if the character is good. The sputum in children below six or seven years is swallowed but throat smears or gastric lavage will give sample of sputum. The earliest physical signs are the fine rales heard at the end of inspiration. Later, moderate dullness which may be found by light percussion. Increased breath sounds occur over the normal lung due to its increased work. By the second or third day the affected lung shows bronchial breathing. Later, rales are coarse in quality and closer to the ear. Friction sounds are rarely heard. Vocal fremitus has very little value due to the high pitched voice in children. Very frequently x-ray will show consolidation before the physical signs are demonstrated. The exact consolidated area often cannot be located until resolution has started, due to the small size of the area involved. Cowherd<sup>1</sup> states "Many of these light cases are so-called central pneumonias situated around the bronchus with so much normal lung over the consolidated area that the signs are entirely obscured."

Many children with lobar pneumonia do not seem very ill, but seem actually stimulated, not exhausted. They generally do not seem toxic. It is really rare for a child to die from lobar pneumonia if he has had medical care. According to Griffith and Mitchell<sup>6</sup> "pneumonia begins at the periphery of the lung. The early shadow in the x-ray is triangular in shape with the base of the plurae. It is only when the apex of the consolidated portion has extended to the hilus of the lung, that bronchial breathing and bronchophony develop." There are many variations in lobar pneumonia such as:

(a) Abortive pneumonia where the disease may be over in eight hours to three days; many of these cases are diagnosed only with the x-ray.

(b) Cerebral pneumonia; manifested by convulsions and meningismus.

(c) Gastro enteric pneumonia may have coated tongue, vomiting and diarrhea lasting three or four days. The pneumonia may be entirely overlooked.

Complications and sequelae:

(a) Pleurisy or pleuritis is common.

(b) Five to ten per cent more empyema in children than in adults.

(c) Bronchitis may occur before or after pneumonia.

(d) Otitis media occurs in fifteen per cent of cases.

(e) Pneumococcic peritonitis may occur.

(f) Pneumococcic meningitis is not unusual.

Course and prognosis:

If the disease occurs past infancy, the results are usually good. The lung findings may remain for

weeks or months. Poor prognostic signs are:

(a) Marked cyanosis.

(b) Great abdominal distention.

(c) Low leukocyte count.

(d) Positive blood culture.

General mortality of lobar pneumonia in children is three to five per cent if case is well handled. In neglected cases and those with poor medical management mortality during the first two years may be as high as twenty-five per cent.

The diagnosis is based principally on the sudden onset, coldness, convulsions, vomiting and a high continuous temperature. Any child that has a temperature of 103 or over for three consecutive days, associated with an upper respiratory track infection, very likely has pneumonia. No doubt, a great many children are accredited with having pneumonia when only a severe la grippe is present.

Bronchopneumonia in children is generally called lobular pneumonia or catarrhal pneumonia. This type of disease may be primary or secondary. Seventy-five per cent or more of these cases occur during the first two years; after the fourth year, bronchopneumonia is usually a complication rather than the primary disease. Bacteriologically, the primary form is due to the pneumococcus, while the secondary type may be a mixed infection.

Pathologically the lesions of bronchopneumonia are found in the small lobules disseminated throughout the lung, usually involving both lungs. The lower lobes posteriorly are most often affected, the left more common than the right. The x-ray has a patchy mottled appearance.

Whether primary or secondary bronchopneumonia—symptoms and signs are similar—except the reaction is much more severe following some other disease. There is often a preceedent cold or tracheo-bronchitis with a rise in temperature, vomiting or convulsion, rapid difficult breathing, prostration, cough, more or less cyanosis, pulse in rapid and the child appears acutely ill. Temperature is more fluctuating than in lobar pneumonia; the cough may be severe or very slight and there may be a thready pulse up to 200 per minute with EKG showing a toxic myocarditis. The child is markedly prostrated in contrast to the seemingly stimulating effect of lobar type. The physical signs are quite often few in number. May have only rough breathing over both lungs. Generally speaking, physical signs in bronchopneumonia are very difficult to elicit. The diagnosis is based mainly on the symptoms and a temperature of 103 or more for three days. As this type of pneumonia quite often attacks a previously ill patient the incidence of complications is more marked than in lobar pneumonia.

Relapses and recurrences are quite common. The

average case lasts from two to three weeks. Some cases go for a much longer period and some die in two or three days from onset. The mortality runs from ten to fifty per cent making the outlook much worse than lobar pneumonia. Diagnosis is sometimes very difficult to make especially during the early stages of the disease. Bronchitis usually does not manifest such a severely ill child and temperature is not as high. Tuberculous pneumonia usually shows positive sputum. Atelectasis from ricketic deformities does not present such a high fever and no rapid prostration. The sputum should be examined for Vincents infections and mycotic infections.

Treatment: The best treatment is essentially no treatment according to Cowherd<sup>1</sup>. Nemir<sup>3</sup> reports 151 children treated with pneumonia serum, using 253 as controls. In patients less than two years Type 1 pneumococcus seemed most predominant. The use of serum in this series of cases showed no reduction of mortality due to use of serum. However, most of the cases had their crisis in twelve to eighteen hours after the first dose of serum. Empyema was much less common. No case was treated longer than forty-eight hours. The serum was given intramuscularly, undiluted. Towson<sup>4</sup> reports 354 pneumonia cases between one month and ten years of age. One-third of the cases had aural complications. He advises early drainage of all bulging ears.

The general treatment of childhood pneumonia includes:

1. Change of position frequently.
2. In bronchopneumonia, mustard plasters or diathermy seem to be of value.
3. The bronchopneumonia case is greatly benefited by continuous tincture of benzoin inhalation. If cyanosis is present, oxygen can also be introduced into the tent with the inhalation. Jonix<sup>5</sup> of Groningen, Netherlands has devised a method of determining arterial oxygen saturation and he finds of all types of pneumonia in adults and children, the greatest amount of unsaturation exists with bronchopneumonia in infants. Therefore, continuous oxygen is very important in these cases. Oxygen may also be given subcutaneously in 100 to 400 cc. dosages.
4. The diet is principally milk and fruit juices. Liquids are important as many cases are seen markedly dehydrated and often subcutaneous or intravenous fluids must be administered. Small blood transfusions in markedly toxic cases seem to be of great value.
5. If fever remains quite high and child seems quite listless, warm tubbings may be given every three hours. This should not be used in all cases as hydrotherapy must be individualized in each case.

6. Griffith and Mitchell<sup>6</sup> advise spiritus frumenti in small doses every three hours; also the use of tonic doses of digitalis before any evidence of cardiac failure occurs.

7. Camphorated tincture of opium or small doses of codeine given in sufficient amount to control excessive cough and restlessness.

8. Judicious bleeding is of value in older children especially if evidence of right heart failure.

9. Tympanites is best controlled with enema; hot stupes or eserine 1/500 grain may be given to a two year old child.

10. Type 1 serum seems to be of some value, but most cases of lobar pneumonia are not sick enough for serum. However, in seriously ill children with bronchopneumonia—Type 1 serum may well be given.

Convalescence is rapid in lobar pneumonia. The child should be kept in bed until evidence of consolidation is gone or a week to ten days after the crisis has occurred.

Bronchopneumonia requires all types of tonic treatment. Sulphanilamide, neoprontosil and sulfapyridine are drugs being used in many cases successfully. Recently the clinical results of the use of sulfapyridine<sup>9</sup> were observed in the treatment of twenty-three infants and children. These patients included fourteen with pneumonia, three with empyema, four with bronchitis, three with pneumococcal peritonitis, one with influenzal meningitis and one with subacute bacterial endocarditis. Despite the small number of patients treated, the results, confirmatory of the reports concerning the use of the drug in adults, were encouraging and should prompt its early use, particularly in suspected pneumococcal. If definite improvement should not occur in twenty-four to thirty-six hours, specific serum therapy should be instituted if the clinical condition indicates its use.

Brenneman<sup>7</sup> and Pounders<sup>8</sup> describe forty-five cases of acute laryngotracheobronchitis which might be confused with bronchopneumonia. However, these cases must be handled by tracheotomy, intubation or by bronchoscopic treatment.

Reduction of mortality of pneumonia in children depends on training of the over anxious mother to avoid over clothed children and overheated, dried out homes. The most important contributing factors in common head colds are parched nasal mucous membranes and overheated perspiring bodies. Children should be hardened by wearing very little clothing. They should be allowed to go out doors practically every day of the year.

I wish to present a few rather uncommon cases.



Each patient will be presented with a brief summary.

(1) 2-13-31, D. E. B. Boy, age five weeks, severe gripe for ten days. Both ears red and bulging, dullness over entire right chest, x-ray shows massive fluid collection in right pleural cavity. Paracentesis of both ears, profuse drainage. Three ounces of thick greenish pus aspirated from right chest. Later two tubes inserted between ribs for drainage and Dakins solution irrigations. Normal recovery in seven weeks.

(2) 12-29-38, B. B. Girl, age five months, severe cold for three days, marked cyanosis, lying motionless. Immediately placed in oxygen tent. Dullness and bronchial breathing in right upper lobe. Both ears red and injected. 12-31-38 crisis—temperature from 104 R. to 100 R.—two days later temperature became elevated and following paracentesis of both ears, temperature came to normal in a few hours. Normal recovery in eight days. Dismissed for home care.

(3) 5-2-33, D. D. Girl, age nine years, temperature of 104 degrees R. to 106 degrees R. for five days, no pain, no cough, respiration twenty-eight. Patient brought to hospital for diagnosis. X-ray showed central pneumonia in right lung. Lysis on May third and fourth. Normal recovery.

(4) 1-10-39, P. W. Girl, age three years. Left upper lobe dull with marked increased breath sounds. Marked dehydration and anaemia. Given 500 cc. blood intramuscularly and intravenously. Refused food or liquids by mouth, given nasal feeding, pronylin—grain 5, Tid., and hypodermoclysis for five days. Normal recovery in ten days.

#### Conclusions:

1. The relative rarity of true pneumonia in childhood causes one to question the frequent occurrence of childhood pneumonia as revealed in adult histories.

2. Lobar pneumonia is generally mild and requires principally proper management and very little treatment.

3. Secondary bronchopneumonia is the most dangerous type in childhood and requires much judicious treatment.

4. Serum treatment is probably of no value in childhood, except in shortening the course of the disease and lessening complications.

\*Read before Lyon County Medical Society March seventh.

#### BIBLIOGRAPHY

0. Aldrich, C. A.: Clinical Observation on Grippe as Seen in Pediatric Practice. *Jo. of Pediatrics*; Vol. 11, No. 3, pp. 331.
1. Cowherd, Joseph B.: Pneumonia in Childhood. *The Kansas City Medical Journal*; Vol. 14, No. 5, May, 1938.
2. Holt and Howland: Text, Diseases of Infancy and Childhood. 1926.
3. Nemir, Rosa: Serum Treatment of Pneumonia in Children. *Jo. of Pediatrics*; Vol. 13, No. 2, pp. 219.
4. Towson, Charles: Aural Complications of Pneumonia in Children. *Jo. of Pediatrics*; Vol. , No. 1, pp. 77.
5. Jonix, J. H. P. Gronigen, Netherlands: Oxygen Arterial Saturation and Effect of Oxygen Therapy in Pulmonary Diseases. *American Journal of Pediatrics*; Vol. 57, No. 1, pp. 58.

6. Griffith and Mitchell: Text, Diseases of Infants and Children; 1937.

7. Brenneman,

8. Pounders, Carroll M.: Acute Infective Laryngotracheobronchitis.

9. Barnett, Hartmn, Perley and Ruhoff: The Treatment of Pneumococic Infections in Infants and Children With Sulfapyridine. *A. M. A.*; Vol. 112, No. 6, pp. 527.

## PSYCHOSIS FOLLOWING THE USE OF MARIJUANA WITH REPORT OF CASES

Howard C. Curtis, M.D.

Wichita, Kansas

Marijuana also known as (*Cannibis indica*) and (*Indian Hemp*) grows in practically every state in the union. In some of the states it grows wild, in others it is cultivated. The plant grown in the United States being identical with the one grown in India, differing only in strength, the one grown in India being the stronger.

The derivatives of this plant at one time were used rather often medicinally, but in recent years it has fallen into disuse and is now seldom if ever used in this country as a medicine. Records show that it has been used extensively by the natives of Egypt and at one time it was credited as causing most of the crime and insanity in that country.

When used medicinally it is an anti-spasmodic, analgesic, anesthetic, and narcotic, a cerebrospinal stimulant and a powerful aphrodisiac. It increases intellectual and motor activity, stimulates the vasomotor nerves, and raises arterial tension. In large doses it causes a peculiar pleasant form of intoxication.

The particular traits of the individual are exaggerated, sexual desire is increased, the sight and hearing is stimulated and exalted. The pupils become dilated and frequently a cataleptic state is induced, and sometimes coma, but no deaths have been reported from an overdose. Repeated use of the drug causes mental confusion, deterioration and personality changes.

While under its influence, the patient is usually expansive, hyperactive, restless and has delusions of grandeur and well being. They seem to lose all sense of space and perception, finally as the drug dies out they become drowsy and stuporous. For the past two or three years its use in this locality has seemed to increase, especially among the adolescent, and high school age. It is used at "parties" and social gatherings to give "kick and pep" to the party, without the user realizing its deleterious effects. Some of the most peculiar and atrocious crimes have been committed by individuals while under the influence of this drug.

I desire to report briefly three private cases that had an unhappy ending:

Case 1. A white male, age thirty, family history negative. His parents were of moderate means and patient attended grade school and finished high school. He made fair grades. I first saw him in 1931, when he was twenty-three years old. He worked at intervals in his father's restaurant, but never steady. He was considered by his parents to be somewhat rowdy, would drink whiskey at times, also stay out all night from home, and associate with questionable characters. He also began smoking marijuana and was later arrested and jailed for disturbing the peace. He improved or quieted down while in jail and after a week or so was released. Again in 1932 I was called to see him. His blood and spinal Wassermann tests were negative, he was restless, hyperactive, pupils dilated, he had delusions of grandeur and expansive ideas. We could not keep him at home without restraint, and his family again sent him to jail for the protection of himself and others. I ask for a hearing in lunacy at that time but he again showed some signs of improvement after a few days and no action was taken. He was again set free but after a short time he appeared at the jail again of his own accord and ask to be locked up and treated for his habit but he was not accepted. At that time he was smoking the drug rather freely and rolling his own. He continued his habit and was in and out of trouble, he was married and divorced. Soon his father died and he and his mother moved to Colorado with friends. He secured a job as chauffeur from his friend. In a few months they drove back to Wichita. One night while driving his friend to the country he demanded that his friend sign a bill of sale for the car, also had him sign other papers. He then shot him in the chest, placed him in the back of the car and went to a dance. After the dance he drove to an open well and was going to throw him in but changed his mind and put him back in the car, then drove to the country to a cabin and decided to burn him. He put him in the cabin, set fire to it and burned a part of the building and decided not to burn him. He put him back in the car and drove around Wichita the remainder of the night and in the morning took him to one of our local hospitals and left him, where he died the next day. At that time the patient had in his possession a pistol, whiskey, and marijuana. He was arrested for murder placed in jail and adjudged insane by a commission. He was sent to the Lansing penitentiary and placed in the insane ward. In October, 1938, he was adjudged sane by the prison commission and he was brought back to the Sedgwick County jail awaiting trial for murder.

Case No. 2. A white male age twenty. He gave a

history of smoking marijuana for two years, and he took his first cigaret while at a party, along with friends. After that he took it for the kick or feeling it gave him. He said after he has smoked two or three he felt like he was stepping over the top of the door instead of going through it. He felt great and had no embarrassment. One day while shaving he cut his throat from ear to ear and died within an hour.

Case No. 3. A white male age nineteen, a musician, had smoked marijuana for over a year. He soaked it in alcohol and rolled it himself. When he played in the orchestra for dances the music flowed better after he smoked two or three cigarettes, and he could play fast without any effort and the music seemed to flow without trouble. This patient was killed in an automobile wreck early one morning while returning home from a dance.

It appears from reading the papers of arrests and trials in our courts, that this habit and traffic is rather prevalent. This plant grows wild in Kansas and it has often been found growing along the railroad tracks and waste places. The state of Kansas now has a law prohibiting the cultivation, possession, or sale of marijuana as does practically every other state in the union.

During the year 1935 the Federal Narcotic Bureau seized this illicit product in more than twenty states. Over 14,000 marijuana cigarettes were seized, the largest haul coming from Louisiana. Over ninety per cent in the bulk pounds were seized in New York, six pounds, eight ounces in Kansas. Seizures were also made in eighteen other states.

In April, 1937, a marijuana tax act was introduced to the Seventy-fifth Congress and enacted into law and approved August 2, 1937. This act is closely patterned after the Harrison Narcotic Act and the National Fire arms Act. It is an Internal Revenue Measure, and prohibits the growth and transference unless the producer, importer or dealer is registered with the government.

Conclusions: The effects of marijuana are definitely narcotic in nature.

It is habitually taken for the stimulating effects obtained, and the individuals satisfaction, experienced through the temporary inflation of the personality. No evidence exists that it is cumulative in its effects or that a tolerance may be developed through its continued use. Those who are habitually accustomed to its use frequently develop a delirious rage after its administration during which they are irresponsible and liable to commit violent crimes. Prolonged use will produce mental deterioration, personality changes, and insanity.

Withdrawal symptoms have not been noted as seen in morphine addiction. Marijuana has a worse



effect than heroin. It gives the user a lust to kill, unreasonably without motive. Some of the most heinous crimes have been committed by the users of this drug.

#### DISCUSSION BY J. E. WOLFE, M.D.

DIRECTOR OF PUBLIC HEALTH

City of Wichita

Practically all the properties of the drug are mentioned in the above report. However, each of the descriptive words used could be enlarged to pages of description to actually picture what they really mean.

We wish to discuss only the acute effects of this drug and quote largely from Walton who has compiled a very interesting book based upon the investigations of this drug.

##### Euphoria and Apprehension:

The euphoria varies from mildly pleasant sensations to the wildest ecstasy, although this reaction is by no means constant.

Some become depressed and one has described a trip through hell with heat, devils, white hot pitch forks and all. Some think the preliminary state of mind may have something to do with this and peddlers have been known to advise their clients not to use the weed when depressed as they are just as likely to experience the torments of hell as they are the joys of seventh heaven.

##### Alternating character of effects:

The experience of pleasure or torment have a marked tendency to occur in waves with remissions between. Also, a period of ecstatic delirium may be followed by one of gloom and torment.

##### Double Consciousness:

This is a very peculiar characteristic of the spell of this drug. Most of the users who have described their habit state this peculiar division of personality. They describe themselves as watching the second personality under the intoxication of the drug as though it were a different individual, yet knowing perfectly well that it is they themselves. As a rule, they are not particularly concerned by the antics of this intoxicated individual but rather enjoy the spectacle. Some habitual users, however, have been able to control their actions fairly well even under the influence of the drug. It has been reported that among Hindu and Mexican laborers small quantities of the drug seem to be an asset to them in that they say they do not feel their work and they do it quite willingly.

##### Uncontrolled Criminal Violence:

In spite of the dual personality created by the use of this drug and the ability of some users to exert a control over the effects of the drug, this reasoning can not always be relied upon. As a

result, all normal restraint may be lost and with the slightest provocation or even without it the individual may commit the most atrocious acts of violence to himself or others. Many acts of criminal violence by the users of this drug have been reported all over the country. Considerable argument has arisen by investigators of this habit as to the amount of responsibility such criminals should be held accountable for. Some seem to think that such criminals are irresponsible and the drug wholly to blame. Others hold that due to the dual personality of the drug that the rational side of the personality being sufficient to acquaint the individual with what he is doing is sufficient to make him responsible for what he does. I believe it is generally now believed that the drug causes such acts more by its tendency to remove all normal inhibitions from the individual and cause him to ignore all normal restraining influences and therefore, he heedlessly commits his crimes. It may be said that the drug is frequently used to give the user courage to undertake tasks he otherwise would not attempt. It may also be said that certain criminals have taken it not only to increase their courage for the crime but also that they may use the excuse of intoxication as a mitigation of that crime. It is quite probable that the drug does not give the victim new ideas but probably only greatly exaggerates tendencies already existing. In other words, it is quite improbable that the drug has any peculiar property that incites violence even though many seem to think so.

##### Aphrodisia:

One of the most popular beliefs is that of sexual stimulation. Many cases have been cited of sexual excesses provoked by this drug. It has also been claimed that coitus has been reinforced and repeated by its use. On the other hand, many users of the drug have reported no such sexual stimulation and the reading of a number of case reports leads me to believe that this property of the drug is not so common as popularly believed. It is likely that much of this is again due to the removal of normal inhibitions. There is little doubt, however, that much of the use of this drug has been instituted from the belief in its aphrodisiac action.

##### Circulatory:

Alternate low and rapid pulse may occur but increased rate is the rule. If death occurs from the drug it is probably circulatory although few deaths can be attributed to the drug without other contributing, if not actual, cause of death being present.

##### Autopsy:

Show no characteristic pathology and further support the probably rarity of death in which the drug was the primary and single cause.

(Continued on Page 526)

## PRESIDENT'S PAGE

To the Members of The Kansas Medical Society:

Recently I had an opportunity to attend as a guest a meeting of the Kansas State Board of Medical Registration and Examination. I want first to express to the Board my appreciation of the opportunity to visit them, and the courtesy shown me as President of The Kansas Medical Society, and secondly I want to express to the members of The Kansas Medical Society the complete confidence that I felt in the Board as it proceeded with its work. I was impressed with its sincerity, with the fact that they fully appreciated the responsibility that had been delegated to them by law, and I was greatly impressed with the manner in which they were carrying forward this responsibility.

The Kansas Medical Society is primarily a scientific organization, one devoted to the professional and cultural improvement of the profession. The Kansas State Board of Medical Registration and Examination is a board created by law, and charged with the responsibility of enforcing and administering state laws pertaining to the practice of medicine and surgery. They are to determine first the fitness of all applicants for a license to practice, and in addition they are to protect the public under the direction of the law against medical quackery, either in or out of the profession, or of medical incompetents regardless of the guise under which they practice.

With this definition of the function of each of these two organizations—one a voluntary, scientific agency, the other an official administrative agency created by the law—it seems logical and natural that there should be the closest cooperation between the two, each remembering its particular field and function, that they may collectively serve the best interest of the public.

I was impressed with the character, earnestness, and ability of the Board both as to its individual membership, and as to its collective action. I came away with the feeling that they were doing, in an excellent manner, their part of the job, and I trust that The Kansas Medical Society and its individual members will continue to give to them the support which they merit. If we do give to them this support their accomplishments are bound to be much larger and much more effective than if they function without our support. Again expressing my appreciation to the Board for the opportunity of having sat with them, and secondly expressing to the membership of The Kansas Medical Society my conviction that if our organization will continue to support the Board, that together we will continue to make progress in the interest of the public. I beg to remain

Very truly yours,

C. C. Nesselrode, M.D., President.



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## EDITORIAL

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### AMERICAN MEDICAL ASSOCIATION PLATFORM

In response to present questions concerning the advisability of a national health program and governmental intervention in public health and medicine, the Board of Trustees of the American Medical Association adopted the following recommended platform and description, at a meeting held on November 16-17:

1. The establishment of an agency of federal government under which shall be coordinated and administered all medical and health functions of the federal government exclusive of those of the Army and Navy.

Today the medical and health functions of the United States are divided among a multiplicity of departments, bureaus, and federal agencies. Thus, the United States Public Health Service is in the Federal Security department; the Maternal and Child Welfare Bureaus in the Department of Labor; the Food and Drugs administration in the Department of Agriculture; the Veterans' Administration and many other medical functions are separate bureaus of the government. The WPA, CCC, and PWA are concerned with a similarity of efforts in the field of preventive medicine. The Federal Works Administration and the Federal Housing Administration also have some medical functions.

Since 1875, the American Medical Association has urged the establishment of a single agency in the federal government under which all such functions could be correlated in the interest of efficiency, the avoidance of duplication, and a saving of vast sums of money. Such a federal health agency, with a secretary in the cabinet, or a commission of five or seven members, including competent physicians would be able to administer the medical and health affairs of the government with far more efficiency than is now done.

2. The allotment of such funds as the Congress may make available to any state in actual need for the prevention of disease, the promo-

tion of health and the care of the sick on proof of such need.

The physicians of the United States have given freely of their time and of their funds for the care of the sick. Their contributions to free medical service amount to at least \$1,000,000 a day. The physicians of this country have urged that every person needing medical care be provided with such care. They have urged also the allotment of funds for campaigns against maternal mortality, against venereal disease, and for the investigation and control of cancer. The medical profession does not oppose appropriations by Congress of funds for medical purposes. It feels, however, that in many instances states have sought aid and appropriations for such functions, without any actual need on the part of the state, in order to secure such federal funds as might be available. It has also been impossible, under present technics, to meet actual needs which might exist in certain states with low per capita incomes, with needs far beyond those of wealthier states, in which vast sums are spent.

It is proposed here simply that Congress make available such funds as can be made available for health purposes; that these funds be administered by the federal health agency, mentioned in the first plank of this platform, and that the funds be allotted on proof of actual need to the federal health agency, when that need be for the prevention of disease, for the promotion of health, or for the care of the sick.

3. The principle that the care of the public and the provision of medical service to the sick is primarily a local responsibility.

Obviously if federal funds are made available to the individual states for the purposes mentioned in the second plank of this platform, there might well

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*To All Our Readers . .*

**A Very Merry  
Christmas**

be a lessened tendency in many communities to devote the community's funds for the purpose, and, in effect, to demand that the federal government take over the problem of the care of the sick. Hence, it is suggested that communities do their utmost to meet such needs with funds locally available before bringing their need to the federal health agency, and that the federal health agency determine whether or not the community has done its utmost to meet such need before allotting federal funds for the purpose.

4. The development of a mechanism for meeting the needs of expansion of preventive medical services with local determination of needs and local control of administration.

The medical profession is not static. It wishes to extend preventive medical service to all of the people within the funds available for such a purpose. Obviously, this will require not only a federal health agency which may make suggestions and initiate plans, but also a mechanism in each community for the actual expansion of preventive medical service and for the proper expenditure of funds developed both locally and federally. In the development of new legislation such mechanism may be suitably outlined.

5. The extension of medical care for the indigent and the medically indigent with local determination of needs and local control of administration.

The medical profession does not yield to any other group in this country in its desire to extend care to all of those unable to provide themselves with medical service. The American Medical Association through its House of Delegates has already recognized the possible existence of a small group of persons able to provide themselves with the necessities of life commonly recognized as standard in their own communities, but not capable of meeting a medical emergency. It is recognized, however, that only persons of the same community fully familiar with the circumstances can determine the number of people who come properly under such classification and that only persons in actual contact with such instances are capable of administering suitably and efficiently the medical care that may be required. Hence it is the platform of the American Medical Association that medical care be provided for the indigent and the medically indigent in every com-

munity but that local funds to be first utilized and that local agencies determine the nature of the need and control the expenditure of such funds as may be developed either in the community or by the federal government.

6. In the extension of medical services to all the people, the utmost utilization of qualified medical and hospital facilities already established.

In the so-called National Health Program it is asserted that one-half the counties of the United States are without suitable hospitals, and vast sums are requested for the building of new hospitals. In contrast, reputable agencies within the medical profession assert that there are only 13 counties more than 30 miles removed from a suitable hospital and that in 8 of those 13 counties there are five people per square mile. In the United States today the percentage of hospital beds per 1,000 of population is higher than that of any other country in the world. This fact is completely ignored by those who would indulge in a program for the building of great numbers of new hospitals.

Moreover, it seems to be taken for granted that hospital building has languished in recent years, whereas considerable numbers of hospitals have been built with federal funds by various state agencies and also by the PWA, the WPA and by the Federal Works Administration.

Analyses may indicate that in many instances such hospitals were built without adequate study as to the need which existed or as to the possible efficient functioning once it was erected. Moreover, there is evidence that in recent years many of the hospitals of the United States known as nonprofit voluntary hospitals have had a considerable lack of occupancy due no doubt to the financial situation in considerable part. It seems logical to suggest then that such federal funds as may be available be utilized in providing the needy sick with hospitalization in these well established existing institutions before any attempt is made to indulge in a vast building program with new hospitals. In this point of view the American College of Surgeons, the American Hospital Association, the Catholic Hospital Association, the Protestant Hospital Association and practically every other interested voluntary body agree.



Again it has been argued that the demands for medical care in some sections of the country might require the importation of considerable numbers of physicians or the transportation of numbers of physicians in the areas in which they now are to other areas. In this connection it would seem to be obvious that a change in the economic status of the communities concerned would result promptly in the presence of physicians who might be seeking locations. The utilization of existing qualified facilities would be far more economical than any attempt to develop new facilities.

7. The continued development of the private practice of medicine, subject to such changes as may be necessary to maintain the quality of medical services and to increase their availability.

In the United States today our sickness and death rates are lower than those of any great country in the world. This fact was recognized by the President of the United States when he sent the National Health Program to the Congress for careful study. The President emphasized that a low death rate may not mean much to a man who happens to be dying at the time of tuberculosis. The medical profession recognizes the importance of doing everything possible to prevent every unnecessary death. At the same time it has not been established by any available evidence that a change in the system of medical practice which would substitute salaried government doctors for the private practitioner or which would make the private practitioner subject to the control of public officials would in any way lower sickness and death rates.

There exists, of course, the fact that some persons are unable to obtain medical service in the circumstances in which they live and that others, surrounded by good facilities, do not have the funds available to secure such services. Obviously here again, there is the question of economics as the basis of the difficulty and perhaps lack of organization in distribution of medical service and a failure to utilize new methods for the distribution of costs which might improve the situation.

The medical profession has approved prepayment plans to cover the costs of hospitalization and also prepayment plans on a cash-indemnity basis for

meeting the costs of medical care. It continues, however, to feel that the development of the private practice of medicine which has taken place in this country has led to higher standards of medical practice and of medical service than are elsewhere available and that the maintenance of the quality of the service is fundamental in any health program.

8. Expansion of public health and medical services consistent with the American system of democracy.

Careful study of the history of the development of medical care in various nations of the world leads to the inevitable conclusion that the introduction of methods such as compulsory sickness insurance, state medicine and similar technics results in a trend toward communism or totalitarianism and away from democracy as the established form of government. The intensification of dependence of the individual on the state for the provision of the necessities of life tends to make the individual more and more the creature of the state rather than to make the state the servant of the citizen. Great leaders of American thought have repeatedly emphasized the fact that liberty is too great a price to pay for security. George Washington said, "He who seeks security through surrender of liberty loses both." Benjamin Franklin said, "They that can give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety."

In these times when the maintenance of the American democracy seems to be the most important objective for all the people of this country, the people may well consider whether some of the plans and programs that have been offered for changing the nature of medical service are not in effect the first step toward an abandonment of the self-reliance, free will and personal responsibility that must be the basis of a democratic system of government.

. . . . .

It will be noted that all of the items included in the platform, are subjects which the house of delegates of the American Medical Association has indorsed and that they well describe the extent and methods of governmental assistance which the medical profession believes will be consistent with efficient progress in the fields of public health and medical care. It is believed that the constructive platform

adopted by the Board of Trustees will completely answer the occasional allegation that the medical profession should present a "program" and also that a way has been pointed out therein where worthwhile assistance may be given rather than the tragedies to public health which would result through methods of governmental control and regimentation.

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## OBJECTIVES—PAST AND PRESENT

There have always been individuals who denounced the American Medical Association as a trade union, having as its purpose only the selfish interests of a group of physicians and functioning as a political body. That this should occur was inevitable, since the first active work of the American Medical Association was to raise the standards of medical education and the requirements for medical licensure. The years of struggle to eliminate the old privately operated for profit diploma mills and the establishment of effective state licensing boards could not have been accomplished without offending a few individuals. So too, the patent medicine promoters today, are bitterly opposed to the work of organized medicine in protecting the public from their nostrums. Most of our present public health measures have come wholly or partly through the efforts of the medical profession and we must remember that sanitary measures usually involve the spending of money or the reduction of the profits of factories, dairies, etc. and therefore were not always instituted without powerful opposition.

It should be unnecessary to remind the public that this work is for their own welfare.

Other American Medical Association functions are less known outside the profession and a brief survey of them reveals the constructive work of the organization directed toward the dissemination of scientific knowledge to the profession and the lay public and our primary purpose, the better prevention and treatment of disease. The names and activities of some of the important committees follow:

Journal Publications, these include the American Medical Association Journal, the finest in the world of medical literature, a number of specialty periodicals, and Hygeia.

The Cumulative Index, the only complete index of the world literature essential to the research worker and physician.

The Council on Pharmacy and Chemistry reports through a board of experts from the leading medical schools on new drugs and other medicinal agents. This protects the individual physician from predatory commercial producers of new and inadequately tested medicines by giving him the results of careful testing of new drugs. This function is perhaps the most important of all.

Council on Physical Therapy reports tests of physiotherapy equipment. This is our only means of checking the manufacturer's claims.

Council on Industrial Medicine which works to reduce the hazards of occupational diseases.

Bureau of Health Education supplies radio programs, speakers to lay groups on health subjects and directs lay efforts to shape public health knowledge.

Bureau of Medical Economics collects data on and is attempting to evolve sound principles for group health plans.

Council on Medical Education and Hospitals maintains a constant supervision on medical schools and hospitals to insure that the required high standards of teaching and practice are maintained.

There are other committees for other details but the foregoing constitute the principal activities of the American Medical Association.

During the recent depression years certain socially minded agitators have vigorously attacked the medical organizations for opposing the movement to place the entire profession under the control of a partisan administration. Medicine quite naturally opposed any step in that direction. The American Medical Association has set forth, in a scientific manner, to study the practical results of the numerous attempts and plans to improve the distribution of medical care which are in operation in various communities, before submitting to complete regimentation. Believing that only part of the medical profession and few of the public have ever realized the real purpose of our national association we offer this brief review of its functions and accomplishments.



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## CANCER CONTROL

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### CARCINOMA OF THE PANCREAS

G. A. Westfall, M.D.

Carcinoma of the pancreas comprises about two per cent of all malignancies. Their study is of importance mostly from a diagnostic viewpoint. Description of the symptomatology and treatment of any standard text of fifty years ago will compare favorably with any written today. However, frequent exploratory laparotomies and autopsies have made their diagnostic importance recognized.

They occur more frequently in men than in women in a ratio of three or four to one and are usually seen in patients from forty to seventy years. Cases have been reported as young as twenty-five<sup>1</sup>. The large majority are found in the head of the pancreas or somewhat diffusely in the body. Carcinoma of the tail of the pancreas is very rare. A few are found in the islet of the Langerhan's and ducts<sup>1</sup>. Two types of malignancy are generally recognized—cylindroid cell adeno-carcinoma arising from the ducts and carcinoma simplex arising from the parenchyma. The new growth may be limited to the organ but usually it infiltrates the surrounding structure and causes compression of the common duct with dilation of the gall bladder and jaundice.

Metastases occur early and are first seen in the lymph nodes and liver. These metastatic nodules are small and there is seldom much enlargement of the liver, although it is palpable. Other new growths than carcinoma are occasionally seen. Sarcoma and simple adenoma are extremely rare. Retention cysts of the gland and pseudocysts found in the lesser sac of the peritoneum have been reported.

The first symptoms noted are caused by interference with pancreatic secretions, a mild dyspepsia, distress in the epigastrium and loss of weight with weakness. These are progressive and constant. Appetite is poor and there is a distaste for meats and fats. In a few weeks biliary obstruction occurs. The gall bladder then shortly becomes dilated and is easily palpable. The icterus index quickly reaches a high level where it seldom fluctuates. The patient becomes cachectic. Severe itching is frequent and there may be attacks of syncope.

Occasionally the jaundice may be painless, but in most cases the pain is very annoying and in nearly

half of the cases the pain is unbearable. I recently made a study of the last twenty-two proven cases of carcinoma of the pancreas in our clinic. Four complained of no pain, in eighteen pain was a prominent symptom and six cases required morphine to keep them comfortable. In this series there were three cases, proven at autopsy, which had no jaundice. The few cases where the malignancy is limited to the body or tail of the organ may not have jaundice.

The rare cases of new growth in the islet of Langerham will produce a dramatic hypoglycemia. Kini<sup>3</sup> has reported one case of a very large carcinoma at the head completely surrounding the bile duct, but it remained patent and there was no jaundice. There is frequently a hypochlorhydria and at times bronzing of the skin.

Carcinoma of the pancreas with or without carcinoma of the bile ducts and ampulla of Vater is most frequently confused with stone in the common duct and hepatitis or so-called catarrhal jaundice. This is important as carcinoma of the pancreas and common duct stone are treated surgically but to operate on those inflammatory conditions of the liver and biliary passages is disastrous. Courvoisier's law is still a very valuable aid in making a diagnosis after common duct obstruction. It is jaundice with distended palpable gall bladder is due to either carcinoma at the head of the pancreas or to carcinoma of the common duct below the point where the cystic duct enters the common duct. Jaundice with contracted gall bladder indicates biliary obstruction due to stones within the common duct<sup>4</sup>. Lahey has added the following: Persistent, painless and progressive jaundice with consistently acholic stools is 100 per cent carcinoma of the pancreas. However, we must not forget that most of the cases do have pain and there may be no jaundice. If a case does have all these signs and symptoms it is always carcinoma of the pancreas.

The x-ray gives us no characteristic findings but it is of some help. This is particularly true of negative findings in the rest of the gastro-intestinal tract. A wide sweep of the duodenum around the pancreas is very significant of new growth in this organ. Pancreatic function tests are not of much value.

Frequently the diagnosis has to be made by an explanatory laparotomy, which I believe every patient is entitled to after the diagnosis of inflammatory conditions causing jaundice are ruled out. Biopsies on the gland are dangerous.

The treatment is still only palliative and symptomatic. Probably the most useful procedure that has been done to help these cases is cholecystenterostomy. Lahey has done many of these operations and he makes an anastomosis of the gall bladder to the jeju-

num or duodenum, thus relieving the biliary obstruction. Reports of this operation are from many clinics now and they are nearly all very favorable for palliative relief. The average length of life of the patient is from three to seven months. With this operation many live eighteen to twenty-five months with few symptoms. Occasionally the new growth is not malignant and the patient recovers following this operation. Medical relief of symptoms are not satisfactory. Morphine will relieve pain. Ergotamine Tartrate is supposed to relieve the itching but I have not found it of much help.

Perhaps when we are able to better diagnose early cases some young and bold surgeon will perfect a technique for the successful removal of carcinoma of the pancreas.

### BIBLIOGRAPHY

1. Ewing. Neoplastic Diseases.
2. Lahey, Frank. S. Clin. North America 17:753-764, June '37.
3. Kini, M. G. Brit. J. Surg. 25: 704-705, Jan. '38.
4. Rives; Romano and Sandifer. Surg. Gynec & Obst. 65: 164-177, Aug. '37.

## EYE, EAR, NOSE & THROAT

### ON THE HEREDITARY NATURE OF RETINITIS PIGMENTOSA

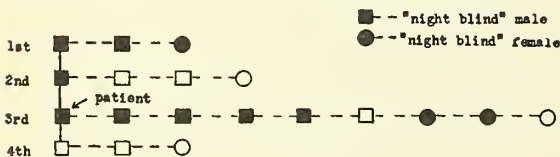
Lyle S. Powell, M.D.

and

Richard L. Dunlap, M.D.

Lawrence, Kansas

Retinitis Pigmentosa has long been classified as an hereditary disease. We wish to present a case for observation in which the most common symptom of this disease, "night blindness," has existed for three generations.



**HISTORY:** The patient, J. M.; white male laborer, age forty-four, first had difficulty seeing at night when eight years of age. His great-grandfather was also afflicted with "night blindness," as were a great-aunt and uncle. J. M.'s father, also "night blind," had two brothers and one sister who were normal. Of his eight children, six had difficulty see-

ing after dark. J. M. has three children, ages sixteen, nineteen, and twenty-one years, none of whom are affected as yet. There have been no intermarriages.

From childhood, the patient has complained of weak eyes and has worn glasses almost constantly. Nevertheless, his vision gradually failed. Vision at present is 5/400 right, 20/50 left, with + 2.00 = -2.00 x 180 lenses. Near vision is 0 right, J3 left, with 2.50 sphere added to the distance lenses.

**FINDINGS:** Ophthalmoscopically his fundus oculi present the picture of advanced Retinitis Pigmentosa. The optic disc is pale and atrophic. In its entirety, the retinal substance is thin and atrophic, beneath which the choroidal pattern can be plainly visualized. All of the retinal vessels are of extremely small caliber and very tortuous. The characteristic "spider or bone cell" pigmentary deposits appear throughout the retina, most numerous along the blood vessels. In some areas, the pigment interrupts the continuity of the vessels, demonstrating its position in the inner retinal layer. His visual fields are contracted concentrically to a maximum diameter of 10 degrees in the right eye and 15 degrees in the left eye.

**DISCUSSION:** Although the cause of Retinitis Pigmentosa is yet unknown, it has long been observed to affect certain families and consanguinity of the parents is not infrequent<sup>1</sup>. There are, however, two quite definite bases from which the theories of the etiology of Retinitis Pigmentosa arise; namely, the vascular and the neuro-epithelial. In support of the former and older theory, N. D. Royle<sup>2</sup> has reported improvement in advanced cases of Retinitis Pigmentosa by surgical interruption of the thoracic sympathetic trunk at the level of the second thoracic ganglion. He observed a marked enlargement of all of the retinal vessels following operation and also noted some improvement in the visual fields. However, the vascular theory is being challenged daily. Schupfer<sup>3</sup> observed the common embryonic origin of the retina and the diencephalon and cited a number of cases of simultaneous affections of the diencephalon and Retinitis Pigmentosa. He stated, however, that at the present time it cannot be shown that the hypothalamic centers exercise a regulatory function upon the trophism of the retina. Farina<sup>4</sup> and Mamola-Bellina<sup>5</sup>, likewise, feel that the neuro-endocrine theory is not the whole story but present cases which seem to point toward a definite relationship between ovarian and hypophyseal deficiency in Retinitis Pigmentosa. In studying the relationship of Retinitis Pigmentosa to Choroidal Angio-Sclerosis, Arnold Sorsby<sup>6</sup> concluded that the weight of histological evidence is in favor of regarding the neuro-epithelium as the primary seat of the affection, but the choroidal factor cannot altogether be ig-





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\*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

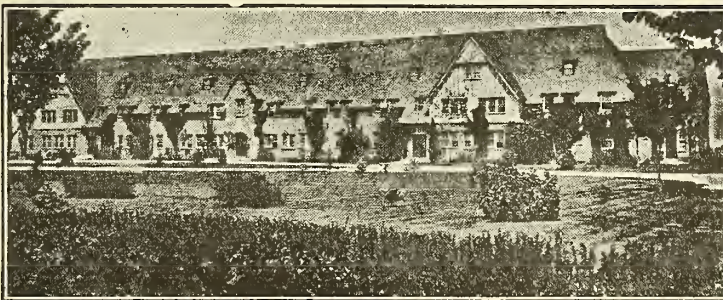
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Superintendent

nored. He feels that there may be two forms of Retinitis Pigmentosa; one mesodermal or choroidal, and one ectodermal or retinal.

Working in the same vein, Wibant<sup>7</sup> suggests that there must be two forms of Retinitis Pigmentosa, namely: (a) a dominant, fairly frequent form, and (b) an uncertain number of different hereditary, recessive forms. By employing Mendel's familiar notations—AA healthy (homozygote); Aa healthy (heterozygote); dd diseased (homozygote); etc., Wibant has worked out an algebraic formula for determining the theoretical number of patients with Retinitis Pigmentosa in any given community. He states that in the so-called dominant form of the disease, the question of related marriage does not enter as a definite factor, since a chromosome carrying this dominant gene will produce Retinitis Pigmentosa in union with any chromosome. However, in the recessive type, the chances for the union of two chromosomes carrying Retinitis Pigmentosa genes is greatly increased through intermarriage. Therefore, the most common type of the disease will be the dominant form.

**CONCLUSION:** As yet no correlation has been found between the dominant and recessive types with those cases showing a preponderance of either retinal or choroidal changes. However, Wibant<sup>7</sup> and others believe that there must be some relationship existing between these factors even though not demonstrable clinically.

This family appears to be a case of the dominant type of Retinitis Pigmentosa, the transmission occurring through the male members. The patient observed, J. M., also shows preponderant retinal involvement. His children, the fourth generation, are being observed for occurrence of the disease. Careful study of such families may divulge a correlation between heredity and clinical types.

#### BIBLIOGRAPHY

1. Parsons, John Herbert; *Diseases of the Eye*, The Macmillan Company, New York, 1934, Seventh Edition, p. 337.
2. Royle, N. D.; *The Treatment of Blindness Associated with Retinitis Pigmentosa*, The Medical Journal of Australia, September 13, 1930, 2:364.
3. Schupfer, F.; *On Retinitis Pigmentosa, With Special Reference to Its Pathogenesis*, Boll. d'ocul., February, 1936, 15:189.
4. Farina, F.; *On the Etiology and Pathogenesis of Retinitis Pigmentosa*, Rassegna ital. d'ottal., September-October, 1936, 5:566.
5. Mamola, P. and Bellina, G.; *New Concepts Regarding the Pathogenesis of Retinitis Pigmentosa*, Rassegna ital. d'ottal., November-December, 1935, 4:699.
6. Sorsby, Arnold; *Choroidal Angio-Sclerosis with Special Reference to Its Hereditary Character*, Brit. J. Ophth. July, 1939, 433-443. *Digest Ophth. and O.R.L.*, September, 1939, 1:25.
7. Wibant, P.; *Relationship and Hereditary and Lenz's Law in Retinitis Pigmentosa*, Nederlandsch Tijdschrift voor Geneeskunde, February 12, 1927.

Early diagnosis of tuberculosis is good economy. To keep an early case in a sanatorium for a few months may cost a few dollars. To keep an advanced case for several years may cost many thousands of dollars. Ohio Public Health, June, 1939.

#### Psychosis Following the Use of Marijuana— Report of Cases

(Continued from Page 517)

##### Distortion of Time and Space:

This is a very characteristic symptom. Users report the sensation of traveling fabulous distances in course of a short walk, while one experienced the sensation of having lived 300 years while under the spell of a single dose. These impressions are probably due to rapid succession of ideas and the magnification of sensory stimuli. Both probably result from narcosis of interpretive functions. They "see" sounds and "hear" colors, for example. Hallucinations are very common as dosage is increased and resembles very often the delirium of fever or disease.

##### Sensory and Motor Anesthesia:

A peculiar sense of unreality is one of the first sensations experienced. This as other initial symptoms comes on with marked suddenness but probably more rapidly when taken by mouth than when smoked. The sense of unreality of "floating" or of the "soul separating" from the body is evidently due, according to Walton, to a narcosis either of the transmission of the body or to narcosis of the receptive centers of this sensation. For example, large doses will produce the symptoms of locomotor ataxia.

##### Analgesia:

How much analgesia this drug produces is questioned by various investigators. Its use to counteract hunger and fatigue has been common. Stokers have used it to make them insensible to heat. And, it has been known to be used by prize fighters expecting defeat. How much it will actually relieve pain seems problematical, although we know the tincture has been used with some success in the treatment of migraine.

##### Chronic effects:

Tolerance—debatable point but undoubtedly is increased to a degree in habitual users.

##### Severity of Withdrawal:

Great craving experienced but is similar to that for tobacco or liquor and is not associated with the severe illness common to opium. No physiological changes take place.

##### Thirst, Appetite, Metabolic Effects:

Great thirst and ravenous appetites are not at all uncommon and have been described by many users. Although nausea and vomiting also often occurs. Hypoglycemia is an indication of the increased metabolism occurring with the use of this drug, although it frequently may also be explained by the hysterical activity of the addicts.

##### Musical Performance:

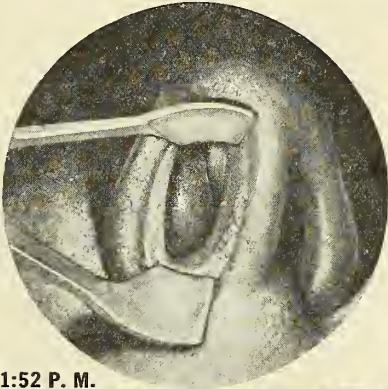
The drug is a doubtful asset although many musicians have thought it made them tone sensitive and able to render musical scores with less effort. I believe, however, that it is a generally accepted opinion



# Effective Lasting Shrinkage

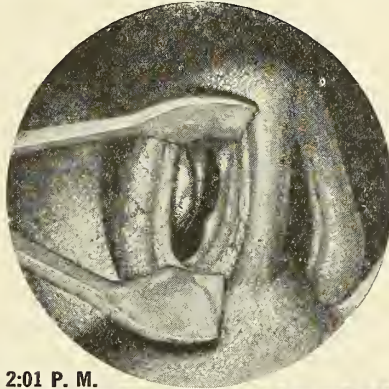
*Case History:* F. O'B. Age 23, male, white. Worker in chromic acid plant. Complained chiefly of earache and head stoppage. Observed at Nose and Throat Clinic of a Philadelphia hospital.

## EFFECTIVE IN MINUTES



1:52 P. M.

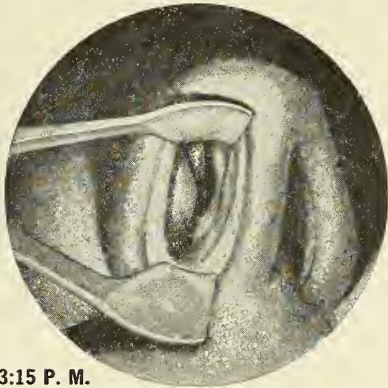
Swollen turbinates and septum. Two inhalations from 'Benzedrine Inhaler.'



2:01 P. M.

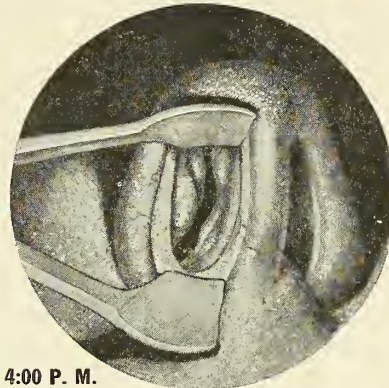
Maximum shrinkage. Inferior and middle turbinates and septum decongested.

## LASTING FOR HOURS



3:15 P. M.

Inferior turbinate and septum still shrunk. Middle turbinate exposed.



4:00 P. M.

Both turbinates still contracted. Very slight return of turgescence.

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of observers that musical performance is not actually improved.

#### Pupillary Changes:

The pupils dilate under narcosis.

#### Diuresis:

Early uses of the drug included that of a diuratic and it is the opinion of most observers that diuresis is the rule.

#### Hypersensitivity:

Some senses appear to be stimulated and other inhibited and it is possible that apparent stimulation is, after all, a type of narcosis such as alcohol exhibits by removal of inhibitions.

#### Hypermotility:

This is expressed by dancing and jumping about, high stepping, etc. Also, over-doses cause convulsions.

#### Somnolence:

This usually marks the conclusion of the experience.

#### Insanity:

In Egypt they have placed much blame on hashish for insanity. Wise reporting thirty-three per cent in the asylum at Cairo. Many victims, however, put the use of this drug secondary to alcohol in its bad effects.

all legal practitioners shall have equal privileges in treating patients in such hospital.

A motion to quash is ordinarily the equivalent of a demurrer. It admits the truth of all allegations well pleaded, but no others. The fact that in an application for mandamus some allegations may be included which are not well pleaded or complaints against the methods of defendants in conducting the hospital about which the petitioner can have no concern apart from the general public cannot be met by a motion to quash. Neither is a motion to quash strengthened by including therein general or specific denials of the material allegations of plaintiffs' petition, nor by counter allegation of fact which might properly appear in an answer or other pleading. Nor does such a motion lie against an application for mandamus because it includes a request for an adjudication of matters of public concern sought in the application for the writ about which no actual controversy exists between plaintiffs as private litigants and these defendants.

The motion to quash is therefore denied, and defendants may have thirty days in which to please further as they may be advised.

As was related in the November issue of the Journal, the Wilson County Hospital had filed a motion to quash to the plaintiffs petition in which it was asked that the Court dismiss the case on the grounds that the plaintiffs had asked only the right to practice medicine and surgery in the Wilson County Hospital and that he did not have that right as a matter of law. The Court's opinion has the effect of stating that the motion to quash is not proper under some of the plaintiffs broad allegations. The opinion, therefore referring to a procedural matter does not pertain to the merits of the case. It is believed that the Wilson County Hospital will file further pleadings in the case within the near future.

Opinions on the demurrers now pending in the District Courts where injunction cases were filed, are expected within the next two weeks. If the demurrers are overruled the cases will proceed to trial. If the demurrers are upheld it will be necessary for county attorneys to join in these actions.

The case of the Kansas State Osteopathic Association v. William H. Burke, Collector of Internal Revenue, will be heard in the United States Circuit Court of Appeals on January 2nd.

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## NEWS NOTES

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### OSTEOPATHS

The Kansas Supreme Court handed down the following opinion on December 9th, in the case of Milton V. Gafney v. the Wilson County Hospital:

MILTON V. GAFNEY and H. C. WALLACE, Plaintiffs  
v.

THE WILSON COUNTY HOSPITAL: T. C. BABB, E. A. WARREN, A. S. HOPKINS, W. H. EDMUNDSON, BRIAN O'BRIAN, Members of the Board of Hospital Trustees of The Wilson County Hospital, and COENA FOSTER, Superintendent of the Wilson County Hospital, Defendants.

Per Curiam: Plaintiffs have invoked our original jurisdiction in mandamus to compel defendants to extend to plaintiffs as duly licensed osteopathic physicians the right to use the county hospital for the purpose of treating their patients.

To the alternative writ allowed, defendants have filed a motion to quash, on various grounds, the first of which is that plaintiffs have no legal capacity to maintain the action. So far as concerns the plaintiff Gafney, the motion is not good, under many of our precedents. (*Kittredge v. Boyd*, 136 Kan. 691, 18 P. 2d 536; *Kern v. Newton City Commissioners*, 147 Kan. 471 P. 2d 954.) The statute authorizing the creation of the county hospital and its governing board declares that no discrimination shall be made against practitioners of any recognized school of healing, and

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### MINUTES

Minutes of the meeting of the Committee on Medical Schools which was held at the University of Kansas School of Medicine, on November 5th, are as follows:

A meeting of the Committee on Medical Schools was held at the University of Kansas School of Medicine in Kansas City on November 5. Members present were: Dr. F. J. McEwen, Wichita, Chairman; Dean H. R. Wahl, Kansas City; Dr. A. R. Chambers, Iola; Dr. L. R. McGill, Hoisington; Dr. D. A. Bitzer, Washington; Dr. L. J. Beyer, Lyons; Dr. N. P. Sherwood, Lawrence; Dr. O. O. Stoland, Lawrence; Dr. J. A. Blount, Larned; Dr. Fred E. Angle, Kansas City; and Dr. L. B. Spake, Kansas City. Clarence G. Munns was present as Executive Secretary.

The minutes of the last meeting were read and approved.



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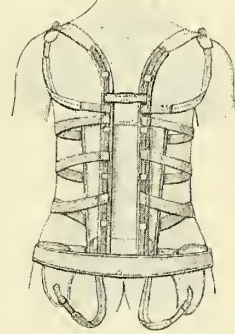
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Dr. McEwen presented a report of the conference of Committee Chairmen held in Topeka on September 10, and of the suggested projects assigned to this committee at that conference.

Dean Wahl presented a report on behalf of the University of Kansas School of Medicine on the following subjects:

1. That the new colored ward will be ready for occupancy during November; that plans are being prepared for completion of the new clinic building and the new childrens building; and that plans are also being prepared for a new x-ray department which will include two deep therapy machines.

2. That some problems still continue on the question of patients who should and should not be admitted to the University of Kansas Hospitals.

3. That student applications for admittance to the University of Kansas School of Medicine continue to exceed available accommodations, and that 162 Kansas applications were received this year from which only 80 students could be admitted.

4. That the University of Kansas School of Medicine admits approximately fifteen special and part-time students each year with the thought that this plan tends to provide medical education for students who otherwise could not be admitted.

5. That the University of Kansas School of Medicine is considering at the present time the possibility of establishing a post graduate school.

The committee discussed the question of location of physicians in small towns, and suggested that the University of Kansas School of Medicine encourage graduates in all ways possible to locate in communities which are not served by physicians.

Discussion followed concerning the possibility of obtaining financial assistance for the purchase of additional x-ray equipment at the medical school. Upon a motion by Dr. Beyer, seconded and carried, the committee agreed to assist in this connection in any way Dean Wahl desires.

Dr. Sherwood presented the following report on behalf of the Lawrence division of the University of Kansas School of Medicine.

1. That the school is still confronted with a serious problem in the housing of its facilities; that it is hoped arrangements can be made wherein \$200,000 or \$250,000 will be provided at the next session of the Legislature for a new building.

2. That the school is attempting to further its facilities for the training of laboratory technicians.

Upon a motion by Dr. Angle, seconded and carried, it was agreed that the committee should recommend to the University that it encourage and assist in the handling of post graduate courses for Kansas laboratory technicians.

It was also agreed that the committee shall incorporate in its annual report a discussion of the need for additional facilities at the Lawrence division of the University of Kansas School of Medicine, and that the committee will assist in all other ways possible on this subject.

Upon motion by Dr. Angle, seconded and carried, it was agreed that the committee shall recommend to the Council that the books and periodicals received by the Journal shall be placed in the Library of the University of Kansas School of Medicine after the Editorial Board is finished with them.

Upon motion by Dr. Chambers, seconded and carried, the committee agreed to recommend to the Edi-

torial Board that it furnish one-fourth page of advertising in the Journal each month without cost in order that the medical school may call its library facilities to the attention of Kansas physicians.

The question of scholastic requirements for admittance to the medical school, and for medical licensure in Kansas was tabled.

The question of acceptance of non-resident students at the medical school was tabled.

The problem of admission of patients to the University of Kansas hospital was discussed, and suggestion was made that an attempt be made to improve this condition in all ways possible.

Dean Wahl was asked to advise the Society central office on possibilities for establishing a plan for utilizing resident physicians at the Kansas State Penitentiary.

Adjournment followed.

Meetings of the Committee on Stormont Medical Library and of the Committee on Endowment were held in Topeka on December 11th. The minutes of these meetings will be published in the next issue of the Journal.

## MEETING

The following members of the Society spoke on the following subjects at the 25th Annual Meeting of the Kansas State Hospital Association held at Topeka, December 8-9: Dr. A. R. Hatcher, Wellington, Round Table Discussion; Dr. H. J. Brown, Winfield, "Anesthesia Standardization"; Dr. Howard E. Snyder, Winfield, "The Women's Field Army Program in Kansas"; Dr. Ray West, Wichita, Recommendations by the Committee on Maternal Welfare on obsterical staff rules in hospitals."

## EXHIBITS

The following concerns have made reservations for technical exhibits at the 1940 annual session of the Society which will be held at Wichita, May 13, 14, 15 and 16:

H. J. Heinz Company, Pittsburg, Pennsylvania  
J. B. Lippincott Company, Philadelphia, Pennsylvania  
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Medical Protective Company, Wheaton, Illinois  
Gerber Products, Fremont, Michigan  
General Electric X-Ray Corporation, Kansas City, Missouri (two spaces)  
A. J. Griner Company, Kansas City, Missouri  
Mid-West Surgical Supply Company, Wichita, Kansas (two spaces)  
Burroughs Wellcome and Company, New York, N. Y. (two spaces)  
M & R Diabetic Laboratories, Inc., Columbus, Ohio  
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It is anticipated that the remaining fifteen or twenty available spaces will be sold prior to January 1st.

### SECRETARIES CONFERENCE

The following representatives of the Society attended the Annual Conference of Secretaries and Editors of Constituent State Medical Associations which was held in Chicago, November 17-18: Dr. C. C. Nesselrode, Kansas City; Dr. John Porter, Concordia; Dr. Lucien Eckles, Dr. W. M. Mills and Dr. Don Wakeman, Topeka; Jack Austin, Executive Secretary Sedgwick County Medical Society, Wichita; Clarence G. Munns, Topeka.

The program presented at the meeting was as follows:

Call to Order. Arthur W. Booth, Chairman of the Board of Trustees of the American Medical Association.

Address. Rock Sleyster, President of the American Medical Association.

The Study of Medical Care in the United States. C. Ellsworth Nyberg, Bureau of Medical Economics of the American Medical Association.

The Wagner Health Bill. W. C. Woodward, Director of the Bureau of Legal Medicine and Legislation of the American Medical Association.

Present Horizons. Austin A. Hayden, Secretary of the Board of Trustees of the American Medical Association.

Address. Nathan B. Van Etten, President-Elect of the American Medical Association.

Medical Service Plans of State and County Medical Societies by Norman M. Scott, Executive Assistant of Medical Society of New Jersey. L. Fernald Foster, Secretary of Michigan State Medical Society. V. W. Spickard, Secretary of Washington State Medical Association. Walter F. Donaldson, Secretary of Medical Society of the State of Pennsylvania.

The Role of the State Medical Journal in Organized Medicine. Samuel J. Kopetzky of the New York State Journal of Medicine.

Rural Medical Service. F. S. Crockett, Committee on Legislative Activities of the American Medical Association.

Meeting Legislative Problems. Thomas A. Hendricks, Executive Secretary of Indiana State Medical Association.

### POST GRADUATE COURSE

The following are the remaining dates and places of the meetings to be held in conjunction with the venereal disease post graduate course now being presented by the Kansas State Board of Health in conjunction with the Society Committee on Control of Venereal Disease:

Beloit, Community Hospital, December 21-22  
 Emporia, Newman Memorial Hospital, January 4-5  
 Junction City, Municipal Building, January 11-12  
 McPherson, County Hospital, January 15-16  
 Winfield, Country Club, January 22-23

The hours of all meetings are four to six, and seventy-three to nine o'clock each day. The speaker for the course is Dr. Arthur D. Gray, of Topeka, who will present correlated lectures on syphilis and gonorrhea.

Meetings of the course have previously been held at: Hays, Colby, Leavenworth, Pratt, Dodge City, Pittsburg, and Marysville.

### MEMBERS

Dr. J. B. Anderson, formerly of Centralia, has moved to Morrell.

Dr. Fred Angle, of Kansas City, spoke before the Kansas City Technicians Club, November 13. His subject was "Undulant Fever".

Dr. Richard Bennett, formerly of Mankato, has moved to Beloit where he will be associated with Dr. M. R. Spessard.

Members of The Kansas Medical Society who have been elected to hold offices in the Kansas City Southwest Clinical Society for the coming year are as follows: Dr. Thomas G. Orr, President; Dr. Clay E. Coburn, Vice-President; Dr. L. G. Allen as a member of the Executive Committee; and Dr. L. F. Barney, Dr. J. F. Hassig, and Dr. C. C. Nesselrode, as members of the Advisory Committee.

Dr. W. M. Mills, of Topeka, attended the meeting of the Western Surgical Association, in Los Angeles, December 15-16.

Dr. R. Herbert Rollow, formerly of Chanute, has located at WaKeeney.

Dr. R. D. Turner, formerly of LeRoy, has accepted a position at the Veterans Administration Facility at Little Rock.

Dr. C. V. Minnick of Wakefield has moved to Oklahoma City, Oklahoma, where he will be a resident surgeon at the Oklahoma City General Hospital.

Dr. E. R. Beiderwell formerly of Belleville, has moved to Mankato. His practice in Belleville will be carried on by his brother Dr. Paul L. Beiderwell.

Dr. Paul Craig of Coffeyville was the author of an article entitled, "Has It Happened To You" in the November issue of the Kansas Cosmetologist.

### COUNTY SOCIETIES

The Bourbon County Medical Society met on November 21 in Fort Scott. Dr. Wayne Hull, of Oklahoma City, Oklahoma, spoke on Oxygen and Helium in the Treatment of Disease.

The Central Kansas Medical Society held a meeting on December 7 at Ellsworth. Dr. John Porter, of Concordia, spoke on "Cardiac Irregularities". Dr. P. T. Bohan, of Kansas City, Missouri, discussed "Causes and Treatment of Hypertension", and Dr. E. T. Gibson, of Kansas City, Missouri, spoke on "Encephalitis". Discussion was by Dr. Fagan N. White, of Russell; Dr. H. S. Dreher, of Luray; and Dr. Lloyd W. Reynolds, of Hays.

The Clay County Medical Society held a meeting on November 15, at Clay Center. Dr. Paul M. Powell, of Topeka, spoke on "Spinal Anaesthesia".



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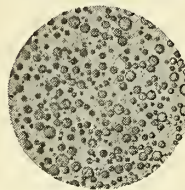
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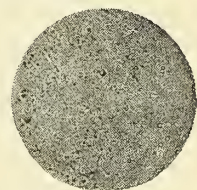
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Dr. Rex Diveley of Kansas City, Missouri, presented motion pictures of a trip by plane through Mexico, Central, and South America, at a meeting of Clay Center Medical Society held in Clay Center on December 13.

The members of the staff of St. Joseph Hospital, at Concordia and the members of the Cloud County Medical Society were guests of the Sisters of St. Joseph at a dinner meeting held at the hospital on November 21. Dr. C. A. Hellwig, of Wichita, spoke on "Atherosclerosis and Coronary Disease".

The Labette County Medical Society met on November 9 at Parsons. Dr. H. S. Major and Dr. Henry S. Millett of Kansas City, Missouri, presented a symposium on child mental hygiene.

The Marion County Medical Society held a meeting at Marion on November 6, with the members of the McPherson and Harvey County Societies as their guests. Dr. William F. Mengert of the University of Iowa, Iowa City, Iowa, and Dr. Mandel L. Spivek, of the Children's Memorial Hospital, of Chicago, Illinois, were the guest speakers.

The following officers were elected for the coming year: Dr. A. C. Eitzen, of Hillsboro, President; Dr. W. M. Tate, of Peabody, Vice-President; Dr. R. R. Melton, of Marion, Secretary. The following will serve on the board of censors: Dr. A. C. Eitzen, of Hillsboro; Dr. A. K. Ratzlaff, of Hillsboro; Dr. T. J. Thomas, of Florence. Dr. R. R. Melton of Marion, is the new delegate; and Dr. E. H. Johnson, of Peabody; and Dr. G. J. Goodsheller, of Marion; were the alternates.

The Sedgwick County Medical Society met November 21 in Wichita, with Dr. Edward H. Hashinger, of Kansas

City, Missouri as the guest speaker. Dr. Hashingers subject was "Cause and Treatment of Obesity". Dr. F. E. Schmidt, of Chicago, Illinois will speak at the next meeting of the society on "Management of the Pneumonias".

The Washington County Medical Society held a dinner meeting on November 14, at Hanover. Dr. H. G. Hurtig and Dr. F. H. Rhoades were guests of honor in celebration of their combined fifty years practice at Hanover. Dr. Arbor D. Munger, of Lincoln, Nebraska, spoke on "Gleanings, from an Urologist's Diary".

The Wilson County Medical Society held a meeting on November 13 in Fredonia. The following officers were elected for next year at the meeting: Dr. Lynn E. Beal, of Fredonia, as President; Dr. W. T. Rich, of Neodesha, as Vice-President, and Dr. E. C. Duncan, of Fredonia, as Secretary and Treasurer. Dr. Duncan has been secretary of that society continuously since 1913 with the exception of 1917 and 1918.

The Wyandotte County Medical Society met in Kansas City on November 21. Speakers were: Dr. C. Omer West, of Kansas City, who spoke on "Seborrhea of the Scalp" and Dr. L. F. Barney, of Kansas City, who spoke on "Liver Abscess". Speakers for a meeting of that society on December 5, were as follows: Dr. Ragnar T. Westman of Kansas City, whose subject was "Future Program of the Health Department" and Dr. D. C. Peete, of Kansas City, Missouri, who spoke on "Rheumatic Heart Disease." Dr. T. G. Orr, Kansas City, Missouri, and Dr. G. M. Tice, Kansas City, will present a symposium on, Carcinoma of the Breast, at a meeting of the society to be held on December 19.

## DUE TO THE WAR

*It will be practically impossible to attend the clinics of Paris, Berlin, London or Warsaw*

*The Kansas Medical Society appreciating the keen disappointment this fact must bring to the average Kansas practitioner — has declared, that from May 13th thru the 16th, Kansas doctors, their wives and secretaries will have available at Wichita, clinics, lectures, demonstrations, partying, trap-shooting, banqueting, golf-shooting, each to the individual taste, enough to cause them to forget the sorrowing incident and the discontinuance of the old country clinics.*

*A Promise.*

**WICHITA MAY 13th-16th**  
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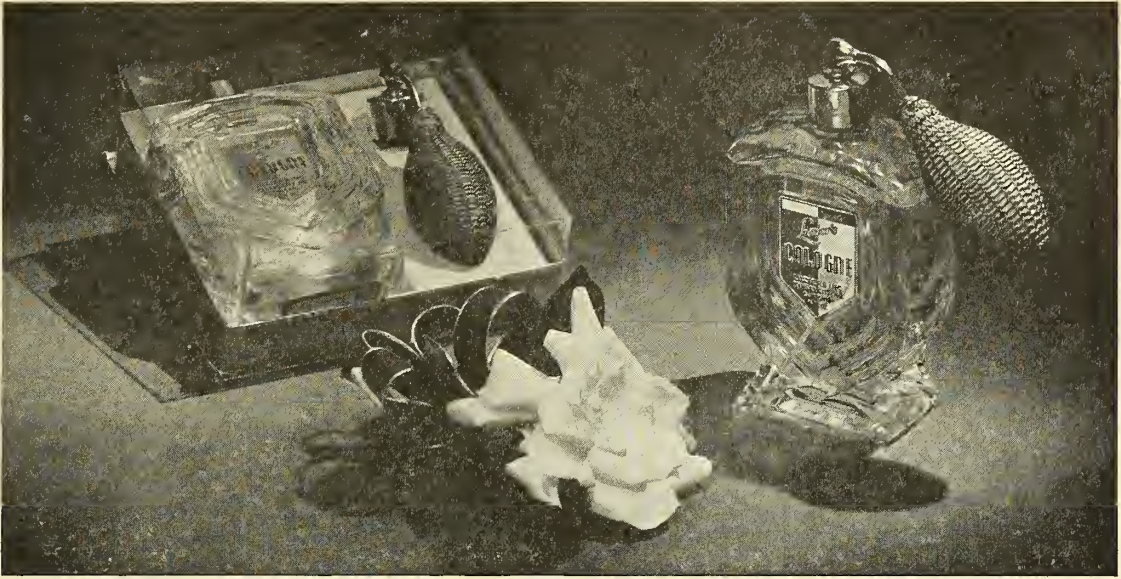
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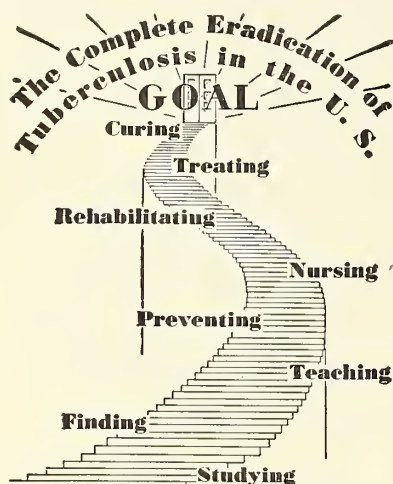
Dr. Louis Griswold, 82 years of age, died at his home in Columbus on October 27. Dr. Griswold was graduated from the St. Louis College of Physicians and Surgeons in 1899 and began practicing medicine in Cherokee County the same year. He was a member of the Cherokee County Medical Society.

Dr. Walter S. Hudiburg, 62 years of age, died on November 22, in Independence. Dr. Hudiburg was born near Independence on February 6, 1877. He was graduated from the Kansas City Medical College in 1905 and came to Independence in 1907. He was the county coroner at the time of his death and a member of the Montgomery County Medical Society.

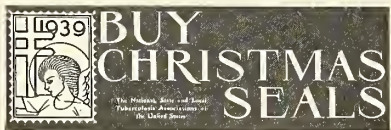
## COLLEGE OF PHYSICIANS

The following is the program presented at the annual meeting of the Kansas section of the American College of Physicians held in Wichita on November 18th:

Pathological Conference, C. A. Hellwig, M.D., Wichita.



ONE SEAL-ONE STEP



"The Histamine Test in Arterial Hypertension". Maurice Snyder, M.D., Salina.

"A New Therapeutic Agent in the treatment of diarrhea". Harold H. Jones, M.D., Winfield.

"Physiology, relative to the Kidney". Earl L. Mills, M.D., Wichita.

"An investigation of important factors bearing upon the specificity and interpretation of serological tests used in the diagnosis of syphilis". N. P. Sherwood, M.D., Professor of Bacteriology, Lawrence.

"Electroencephalography". Norman Reider, M.D., Topeka.

"Lymphosarcoma of the Epidural Space". Ralph L. Drake, M.D., Wichita.

"Report on results of treatment with Metrazol". Ralph M. Fellows, M.D., Osawatomie.

"Insulin Therapy in Mental Diseases". D. V. Conwell, M.D., Halstead.

"Endocrines and Vitamines". J. S. Hughes, Professor of Biochemistry, Manhattan.

"What the Clinician should know about Edema". P. M. Krall, M.D., Kansas City.

## RACKET

Information has been received from Missouri and several other states concerning a person who operates under several aliases and who has defrauded a considerable number of physicians. The person represents himself to be a farmer living in a nearby community. He approaches a physician and states that he would like to be fitted with eye glasses. Upon completion of the examination he presents a check of sizeable amount made payable to him by another person and which usually shows a designation of payment for corn or other farm products. The physician is requested to pay him the difference between the check and the cost of eyeglasses and the check is ultimately found to be worthless.

The person is said to be approximately 43 years of age, 5 feet 9 inches in height and 170 pounds in weight, and has reddish brown hair.

Any physician who encounters him is requested to notify the sheriff of Grundy County, at Trenton, Missouri.

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